The Builder.

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ILLUSTRATION.

The Grosvenor Gallery, New Bond-street, London: Built for Sir Coutts Lindsay, Bart.—Mr. William Thomas Sams, Architect 426-427

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Architectural Practice among the Greeks.

IT is with a certain sympathy with the feelings of the leader of a forlorn hope that we make a first assault on the second division of the Lebadean inscription.* We do so with full consciousness of the many pitfalls and inevitable perplexities that have to be encountered by even experienced epigraphists in dealing with a document of such novel contents, and to them as, at least, more skilful and better on their guard it might seem that the perilous adventure might be left; the most zealous volunteer, apart from such guidance, no doubt exposes himself to disasters that are sometimes ludicrous; forms and phrases which no classical authority helps him to find an open way through, are recognised at once as old acquaintances by those who have devoted days and nights to the collation of obscure and often in themselves very insignificant lapidary texts. But there is a better reason than the mere contagion of enthusiasm that always fills up the numbers of a forlorn hope, for dealing at once and here, and however insufficiently, with the present problem. It is a case in which the epigraphist must look for assistance to the architect, and even to the practical mason; so minute and so special are the technicalities that come into question; and we must own that we shall be surprised if when the consultation breaks up to which they have contributed reciprocally all in their power, it is not admitted on all hands, that a great deal still remains obstinately defiant of elucidation.

To the inscription, then, we apply ourselves with the frank admission that what we can contribute towards explaining it must, of necessity, be very insufficient, and professing no less frankly that we accept the risk of falling into many mistakes, and missing many things by oversight. It may, nevertheless, be understood that we should not commit ourselves even under these reservations, but for seeing our way distinctly enough to presenting a fair outline of some of the questions involved, upon which the counsel of architects cannot be too soon invited.

There is no such careful series of stipulations in this part of the inscription as in the former, respecting sureties and payments of instalments, as if the contractor were assumed to be a more responsible person in this case; though indeed stipulations of any degree of stringency may have followed in the portion of the inscription that is lost.

For the present exposition to be of its full use it will be desirable to indicate some of the original expressions, and this may be done sufficiently from the Roman fount without plaguing the page with Greek typography,—the long vowels being marked when thought necessary, by an accent. Of course it is not pretended or supposed that a thorough commentary would demand anything less than to be accompanied by the full Greek text, and indeed by a critical revision to supplement the first copy before us; we are now only concerned with helping forward some preliminary considerations.

The section begins abruptly,—"The working and setting of the beams for the long flank of the outer circuit of the sanctuary [*sékos*] for the temple [*naos*] of Zeus Basileus."

The next sentence, as the Athenian editor observes, halts for lack of a verb, which may be taken as a warning that the copy is not to be certainly relied on; at least, it is a general principle in relation to Greek inscriptions of a good period, that no error ever occurs in them in respect of even a single letter. The sentence as we have it runs,—"He who has contracted with the *naopoioi* [the controllers of temple construction] appointed for the temple of Zeus Basileus [the King] for the working and setting of the beams, thirteen in number, of the hard Lebadean stone for the long flank of the part looking south of the outer circuit of the sékos." By the sékos we understand that end of the naos proper which was occupied by the statue of the god,—the end, therefore, that would be completed first on the same principle that the cathedral builders made it their first object to complete and cover in the choir. This sentence, such as it is, is entirely and curiously inverted in the original, as if to avoid putting Zeus the King in so undignified a position as at the very end of a long recital of technical details.

"The dimensions of these beams, in length, breadth, and thickness, will correspond with those which are in position on the long flank and completed, which they are to be put next to."

Again the original halts in its grammar, but it will be understood in other cases, as here, that in leaving the discussion of such difficulties aside to deal with the most probable meaning, we are not unaware of their existence; they must be brought to justice elsewhere, and by others; an inserted (?) may occasionally denote their occurrence.

The word which we translate beam (*catastrôtèr*) is literally a "coverer down," and is allied to the term *catastroma*, employed for the deck or hatches of a ship. In its shorter form (*strôtèr*) it is found elsewhere as the term for a rafter that rests upon a beam. The obvious conclusion, which is further borne out, is that these stones were to constitute a portion of the ceiling of the peristyle, and as such might be either, and, indeed, most probably, the comparatively plain transverse beams at intervals, extending from the epistylia to the wall, and carrying the stones of the lacunaria, or else these latter stones themselves, which sometimes rest upon such beams, and sometimes are independent of them, as is the case in the flank ambulatory of the Parthenon.

In the absence of direct information we are left to conjecture that this large Lebadean temple was Doric in style, and we are at no loss for Doric examples of the transverse beam of a peristyle. "The Unedited Antiquities of Attica," of the Dilettanti Society, furnishes several uniform models; it is a plain beam of rectangular section, but for a simple moulding along the upper edges, which meets a return moulding of intermediate blocks above the wall-plate, and sunk ledges above them to receive the overlying margins of the lacunaria stone.

Conformably with ordinary constructive usage the under surface of the beam at either end where it rested on other stones would be worked very smooth, so far as was necessary to ensure a very fine joint in front, but beyond this only roughened by cross-hatching and dotting. Not only was it usual for the mouldings to be left uncut until the block was placed, but the faces also were left rough,—that is, in the case of a beam, the exposed double sides,—but it seems reasonable to infer that the under surface, which could not then be so easily dealt with when in position, must have been previously fairly finished on the ground.

The ends of the beam and the upper surface, as both out of sight and not necessarily in contact with any other stones, might be left in a comparatively coarse state,—but might also, as probably, be worked to lie close to adjacent stones.

If all seems tolerably clear so far, let resolution be braced to deal with the next clause, which we thus do our best to represent:—"The contractor, after he has received the stones at the temple, where also they have been passed as sound, having the dimensions required for finishing off [?] to the inscribed magnitudes, shall, in the first place, work the under surfaces [*basis*] of all the stones straight, unswerving, unruptured [=apparently—of straight outline at edge, level in surface, and perfectly smooth], convermilioned [*summiltous*], as regards all the parts that ride upon the containing members [*crateutas*] and the wall-plate or wall-beam [*hypesthunteria*,=the under-director], for not less than 2 ft. from the advancing joints [*prosiontos harmou*] employing a strong [or close] clawed sharpened tool, but as regards the middle parts that rub together, with a rough clawed tool [*scis*], working them all straight by a canon [? a rule or templet] that is not less in length than the stone which is being wrought, nor of less thickness than six dactyls [about 4½ in.] and half a foot high."

The clawed tools, of which the use is prescribed here, are, of course, the *gradini* of the Roman sculptors of our own day, which are distinguished as here by different degrees of closeness and sharpness of the teeth.

* See p. 336, *ante*.

The word which we translate as referring to the stones that are to lie close upon either side of the beam when in position has a probable warranty for this sense in Homer's employment of it for the fork or frame on which a spit turns. The word represented in the translation by "for finishing off" is employed by Herodotus for the operation by which the exiled Alcmæonids completed the temple at Delphi with a more expensive marble; so far the purport of the word here in itself seems beyond challenge, but its form is surely miscopied, and has to be wrested to make, not merely the sense assigned to it, but any sense at all. It will be observed that the finer tool is prescribed for working so much of the under surface that is adjacent to the visible joints, though the reference of the dimension of 2 ft. is not very intelligible, while the coarser tool suffices for the rough intermediate surfaces.

But, still, the clause bristles with difficulties. What is to be said of the mode and purpose of application of this stalwart *canon*, and what of the proper meaning of *con-vermilioned?*—a barbarous word, but the only convenient intelligible representative of the new Greek word.

From something which we shall come upon presently it will appear probable that the vermilion was in some manner employed by being smeared or spread over the canon, in which case our translation might—begging some indulgence from the text—import that the beds or under-surfaces were "to be convermilioned straight, level, smooth," &c., though we only so exchange one puzzle for another. However, let us go on.

"And he shall undercut [or cut below] from the bed of all the beams the part which rides upon the wall-plate to the indicated breadth and depth from the retiring-joint (*apion'os harmou*—query, of the back joint), working the undercuttings [or say, to avoid an equivocal expression—the subcuttings] in the same manner as has been written, down about the beds [that is, with a close-toothed and sharpened tool], making an easing [*chalasma*] in the subcutting, which is near the wall-plate, of not more than a little dactyl" [an ordinary dactyl being about three quarters of an inch]. This *chalasma* reads like an adjustment at the edge to take off the bearing from a projecting moulding below. "And he shall work all the retiring-joints of the beams convermilioned straight, level, and smooth, at true angles by the *prosagogeion* [an instrument described elsewhere in a sense not applicable here, as for straightening wood], solid all round on the three parts for not less than nine dactyls [about 7 in.], with a smooth sharpened chisel, applying vermilion [*miltologôn*] properly; but the intermediate rubbing parts with a coarse-toothed tool."

Here we have intermediate or middle parts again called parts that rub, and roughly dealt with. In the joints and beds of Greek masonry we are familiar with the smoothly-finished margin by which the stones were brought to the closest and finest proximity, and a central roughly-finished portion, of which no part could be left higher than the smooth margin, and indeed might seem to require to be slightly sunk. Sunk, indeed, for the most part, they must be if roughly tooled, as the highest bearing-points could not be higher than the smooth rims; certain portions, in fact, were made precisely level with the margins, for the sake of taking some responsibility for the bearing, and to this extent the central or intermediate parts would be in partial contact, and might get the technical name of the rubbing parts. The three parts more finely worked seems to be the bottom and two sides of the beam, which would show visible joints. Further assistance, however, will be most welcome in explanation of the place and purpose of the subcutting (*hypotome*), the *chalasma*, and, not least, of the process referred to as *miltology*, of which we are to hear more.

Too many difficulties are before us to linger longer upon these at present.

"And he shall close up [*anathurôsei*=door or shut up] all the retiring joints with a stone canon, miltologising properly [or applying miltology,—treatment with vermilion, properly,—with a stone canon], scraping all the canons as frequently as we bid him by the stone canon, which is in the hieron [or sacred building], when he has properly scraped all the retiring-joints of the beams as . . . . like those which are in position completed, by which he is about to place them." . . . The identification of the "retiring-joints" in question is probably the least difficulty in the interpretation of this passage.

Here the inscription has a lacuna, after which we come upon notice of quite new work, to something in "an upright position from the left,"—"and when he has painted [?] the long flanks and lines [qy., mouldings] of the prodomus, in the presence of the architect, he shall remove the *prosergon*" [somewhat pertaining to the works,—qy., he shall strike the scaffolding]—The prodomus may either be the proper pronaos between the antæ or the interior of the front portico in advance of them.—He is then to do something to a given breadth with a tool called a colaptèr, apparently from analogy to the word used for the pecking of a bird, a sort of pick.

—"And he shall treat with miltology the extremity [*acran*—perhaps the surface] of all the thirteen stones in position by a canon, not less in length than twenty feet, six dactyls thick, and half a foot high." Here we are all at once carried away from the thirteen stones that have to be wrought and set, to another thirteen that are already in position.

These dimensions are quite inexplicable, and, indeed, at this point, the inscription for a time becomes,—for us, at least,—nothing less than bewildering; especially as the copy provided only charily indicates where it is probable that the readings are uncertain. However, the best service that the case admits of is probably to plod on and give the best translation that can be arrived at under present circumstances, as a basis at least for the commencement of further study by other students.

Mention then occurs again of "miltologising with a smooth sharpened chisel [as previously stones were to be made *convermilioned* with a different tool,—line 104] . . . making some things [of neuter gender] straight, smooth, convermilioned of not less depth than . . . . dactyls, having first smoothed off figures [*sémeias*] . . . . according to each of the stones in the upright by the *prosagogeion* and [doing somewhat to] the inscribed line by which he shall scrape [or rub off] the scraping [*paraxoe*]. And he shall also scrape the line [qy., the cut moulding?] in the prodomus; then he shall close up the joints by the stone canon of the beams in position, by which he is about to place [or set the others] in the manner as also has been written about the retiring joints. But when he is about to set the stones he shall first dress anew [*proepicopsei*] the containers [*crateutai*] at the head and the wall-beam,—the containers with a close-clawed sharpened tool, and the wall-beam with a smooth-edged chisel correspondingly with those that are in position and complete, and shall exhibit them properly dressed."

"Then he shall place the beams after he has worked them as has been written, beginning the setting from the left as may be indicated to him about one joint . . . . [doing something with somewhat] wedge-shaped and [marching or] going in a line in order with those which are in position and complete."

It is not easy to go through this without holding the breath and asking oneself what three-fourths of it really mean. That some passages which read most suspiciously are, in truth, least open to suspicion may be concluded from what now immediately follows to justify them in plain terms, though scarcely to explain.

"And he shall use pure olive oil for all the canons and vermilion of Sinope; and if he does not use vermilion of Sinope or pure olive oil, he shall be fined by the Naopoioi and the Boiotarchs, and no stone shall be shut up [literally, shall be keyed or locked in] by him until he proves to the Naopoioi that he has used vermilion of Sinope and pure olive oil."

The repetitions which occur in this sentence are such as might be due to a desire to make the letters of the inscription tell up on the same principle that promoted the verbiage of modern law; in any case, it is a warning that the specification at large is in many clauses unduly extended from mere clumsiness of style. In the substance of the present clause we might reasonably hope for some hint as to the real employment and use of the (*miltos*) vermilion, which is referred to throughout the document in such various technical and grammatical forms. What we do learn is, that it was used in such a manner as made its quality of importance, and in such quantity as to give a motive for substitution of inferior quality. One obvious conjecture when we meet with the mention of vermilion at the commencement of the inscription, is that it may have been used in place of the chalk of our artisans for application to the line employed to mark levels and verticals; so we learn from Aristophanes how a cord reddened with vermilion was used to sweep the Agora at Athens of idle gossippers, when the public assembly was convened, and all who were not brisk enough to skip out of the way and hasten to the meeting caught a red mark from it and incurred fine. There is full probability that a vermilioned cord was put to the same use by the ancients as the chalked cord of the modern carpenter, but this is manifestly inadequate to cover the formulas of the inscription, except in one case where the editor suggests mention of a plumb-line as a conjectural reading.

Vitruvius enters into detail as to the preparation of vermilion as well as into its application as a pigment, and the process to be employed to preserve the colour against the influence of light, but helps no farther, and we turn to Pliny's chapter equally in vain.

Apparently, again, the vermilion was used in conjunction with—in fact, was mixed with—olive oil, and so applied to the canons, which in some cases were certainly of wood, but in others are specified as of stone, and employed in this mysterious process of miltology, and requiring not unfrequent scraping in consequence. To increase the difficulty, miltology was to be applied in some cases, as we have seen, by agency of a chisel, no canon being mentioned in that case. In the Hercules furens of Euripides the Cyclopean constructions of Mycenæ are spoken of as having been "adjusted by purpled canon and chisels,"—

τὰ Κυκλώπων βάθρα
φοίνικι κανόνι καὶ τύκοις ἡρμοσμένα (946);

and we owe to a note on the lines an apt illustration from an epigram of Leonidas of Tarentum (Reiske, 23),—

καὶ μίλτῳ φυρόμενοι κανόνες—

"and canons [or workmen's rules or templets] smeared with vermilion."

The Cyclopean walls referred to are doubtless those of the so-called second order, composed of neatly-fitted but irregular polygons. Italian workmen at this day adjust polygonal slabs for pavements by a rule which, taking an internal angle from stones in position, gives by the same adjustment the corresponding external angle for that which is to be fitted to the recess; but neither vermilion nor chalk is required for producing work of this kind with considerable accuracy. Paving-stones, however, are but coarse illustrations of fine Greek temple masonry, and the secret seems to lie in some special management for obtaining the exceedingly true surfaces by which even the joints of an architrave could be made all but invisible. On a forlorn hope, as we confessedly are at present, we need not shrink from admitting that the case suggests to us a possible anticipation of something like the processes by which Sir Joseph Whitworth effected his great achievement of a perfectly plane surface.

Mr. Penrose, to whose "Principles of Athenian Architecture" the illustrator of both the theory and the construction of the Greek temple may always be happy to own his obligations, remarks on the difficulty of explaining how the vertical joints of the Parthenon architraves could have been obtained of such exquisite fineness. He considers that the method most probably employed was in that case the same which is sometimes in use by modern masons, namely, passing a thin saw-blade between the two contiguous surfaces already carefully prepared, and afterwards wedging the stones closely together.

However, there is the case, for which the consideration of architects is solicited, as jurymen sometimes have to hear from a judge, in place of a detailed, not to say leading, summing-up,—"The case is before you, gentlemen; I cannot assist you."

Dodwell relates that the frustrum of a column of the Propylæa, when just thrown down, showed red chalk (?) marks, which unluckily a storm washed off before he could examine them; the pieces of square wood which received a central metallic pivot were painted red.

We now come upon still another enigmatical process—trimmatology. "He shall . . . . [apparently show] the working and setting to the architect, but the joints and beds [*harmoi* and *bassis*] of all the stones to the sub-architect [the hyparchitect], at the same time applying trimmatology [apparently smoothing by friction or rubbing, if not actual polishing]." . . . . He is then to do something to certain things "that have gone into their special places, entire, unbroken, undeniable, with nothing below them, grinding together, as he drives the . . . . of the rubbings [query, marble-dust] so far as into the *containers* [crateutai], with a toothed, close,

sharpened tool [xoïs], and for the part below the hypouthynteria [which we have conjecturally translated wall-plate, or wall-beam], with a smooth-edged tool, and the joints with a smooth chisel from oil, and [through or] by an iron pin [rhabdion ?]." Here we suspend commentary in simple despair, and in very grave mistrust of the sufficiency of the text provided for us.

"And when he has completed the joint after cleansing it with soda, and washing it with pure water, he shall then lock [or close] it in."

This clause shows that the preceding referred to the process of actually getting the stone into its precise place, and "the joint" here means not the smoothed portion of the upright surface of a single stone which it seems to import elsewhere, but the final bringing together of vertical faces.

"But the putting in of the plugs and clamps and [axelike] or double clamps [*pelekinoi*—the *securiculæ* of Vitruvius] and the weight of these and the running in of the lead, to the Naopoioi . . . . let the contractor being present in person . . . . but not lock in anything that has not been exhibited. And should he so lock in anything, he shall raise it and do over again from the beginning, and shall be fined by the Naopoioi and the Bœotarchs as he may appear to deserve for not doing what things have been written in the agreement. And if any other of the associated workmen should be convicted of bad workmanship in any matter, let him be expelled from the work, and no longer take part in it; and if he disobeys he also shall be fined along with the contractor. And he shall not run with lead any stone before he shall have done what has been written down. And, if possibly, in the course of the work, it may be advantageous to vary in any degree from what has been written by omission or addition he shall do as we give orders.

"And when he has set all the beams he shall dress them by the head [qy., in order,—or from above downwards,—or atop ?] corresponding with those which are in position and completed, and apply miltology properly by the long canon with a clawed tool, chiselling [or pecking] them all one after another—after having used the compass [or level ?] to them throughout [or atop]." And so the inscription as copied, from a parting puzzle, breaks off with the mutilated lines,—respecting the circuit (*peritenesias*) of the beams—the preparation of cubes of dry or seasoned wild olive wood,—the exhibition of some things (neuter plural) straight and con-vermilioned (*summilta*).

M. Coumanoudes expresses a hope that he will not be taxed with rashness in his treatment of the text, and his endeavours to recover it in doubtful places; he may be safely credited with care and moderation in this respect, while nothing but gratitude is due to him for the promptness with which he has laid it before the world. We are the more disposed perhaps to recommend the most liberal indulgence from consciousness that an attempt to elucidate the inscription is likely to stand still more in need of merciful allowance. Some one, however, must lead the way, and, perhaps, not the least service of a first attempt, however imperfect, is that the eagerness of a second investigation is often marvellously whetted by the opportunity of seasoning his own discoveries with smart reflections on the crudities of a predecessor. So to revert to our metaphor of the forlorn hope, a more fortunate expositor is heartily welcome to make stepping-stones of us on his road to glory, which we shall not sympathise with any the less.

The only information that we have as to the age of the inscription is, that the forms of the letters seem to indicate a time before the Christian era. The mention of Bœotarchs gives us no assistance; we meet with them in Thucydides as a board of eleven officials, having their head-quarters at Thebes, but apparently representing as many cities, which constituted the Bœotian Confederation; but even when the Confederation fell apart, Bœotarchs were still appointed, and the office was precisely one of those that were continued shorn of powers under the Roman Empire; and accordingly Bœotarchs continue to be found at Thebes as late as the second century.

The Sunday Society.—The second public annual meeting of the members and friends of this society, which seeks to obtain the opening of museums, art galleries, and gardens on Sundays, will be held on Saturday afternoon, May 12th, at the Freemasons' Hall, Great Queen-street, when the Dean of Westminster will take the chair, and deliver an address as president.

THE KENSINGTON VESTRY COMPETITION.

The designs submitted in competition for the proposed new Vestry-hall in High-street, Kensington, were exhibited last week in the old Kensington Schoolroom, and will probably be open for public inspection next week; the present week, we believe, has been employed in a detailed examination of the plans by the Committee, or their professional representative. The Vestry have bound themselves by their conditions to call in professional advice, and we hope they have obtained the assistance of some one whose name will command the confidence of competitors, since it is unquestionable that a great and disproportionate amount of labour and skill has been expended on the drawings. In fact, the collection of designs would seem to indicate that there is more talk than reality in the sentiments about competitions, which have so often been put forth and endorsed by architects, in condemnation of the whole system. Those who have been bitten, and are consequently bitter for a time against the whole system, make up their minds, we must suppose, for one more try; and hence it comes that no less than sixty-five gentlemen are willing to send in sets of drawings, some of them of great beauty and elaboration, on the preposterously large scale of ¼ in. to a foot, forming a total of work which it is melancholy to look at, considering that all but a small portion of it must necessarily be lost labour. To comment in detail on the collection would demand an amount of space as disproportionate to the end in view as the collection itself must be said to be: we must content ourselves with a few notes as to the characteristics of some of the designs which struck us most favourably.

The new building is to stand on a site immediately east of that of the present Vestry-hall, the south or principal front adjoining the High-street. The plan of the site is irregular and awkward, scarcely a right angle being possible in the external walls of the new building, except at some sacrifice of space; the portion available for the building being an irregular parallelogram, of about 98 ft. by from 40 ft. to 50 ft., flanking the High-street, and considerably wider at the west than the east end, and an irregular but nearly square area adjoining on the north, making a kind of L-shape of the whole. The site thus naturally divides itself into two portions, and it is in the combining of these so as to produce a tolerably symmetrical plan and get over the odd angles by throwing them into unimportant parts of the building, that a good deal of the difficulty of the problem consists. The accommodation required may also be divided into two sections, the one comprising a large hall and committee-rooms, and the other the vestry clerk's and surveyor's departments and other offices. The most rational method of dealing with such requirements would seem to be, to group the smaller offices on one floor, and combine the hall and committee-rooms, which are all larger rooms, and require greater height, in a suite on another floor; in doing which common sense will, of course, suggest the placing of the business-rooms, which are for more general access, on the ground-floor, and the larger rooms on a principal floor above it, which will thus also form the principal story of the external design, considered from an architectural point of view. So far, the appropriate treatment of the building seems self-evident, as well as the placing of the principal entrance towards High-street; the question whether entirely separate entrances for the business floor and the hall and committee floor are to be regarded as necessary would depend upon the nature of the plan and the degree of state character aimed at in regard to the hall entrance. But as the Vestry-hall in such cases is almost always regarded as a room available for public meetings and entertainments, apart from the business of the Vestry, it would appear to us that the most complete and satisfactory plan would be that which would furnish a special entrance and staircase of as much dignity and spaciousness as is consistent with the scale of the building and the practical utilisation of floor-area. Few, however, of the competitors have attempted this in reality; a good many have two or more entrances, of which one counts as a principal one, but without separating the internal traffic at all; so that there are but few instances in which the plan would really explain itself to any one entering the building, or carry out the division suggested in the exterior treatment.

The competitors are tied up in regard to design by an odd restriction, that the design "shall not be Gothic or Elizabethan." Certain prejudices against Gothic are comprehensible, in regard to ideas (only too much fostered by the practice of some designers) as to the inconvenience or unsuitability of Gothic buildings for business purposes; but why a style which lends itself so readily to the most practical modern building as Elizabethan is forbidden, it is difficult to understand, except on the supposition that the Vestry desire a palatial structure with Classic orders as their *beau idéal* of a vestry-hall. This wish, if it exists, has been eluded by a majority of the competitors, some of whom indeed have shown no little ingenuity in the manner in which they have used Elizabethan features with just so much freedom as to escape the letter of the law, or have combined Classic details in an *ensemble* essentially Gothic in character and principle; while others have taken refuge in a pure Queen Anne method, or a late Jacobean; which certainly is in harmony with the *genius loci*, if that argument is to be regarded as of importance. The limit of expenditure is placed at 18,000*l.*, and on the whole it does not appear to us that the possibilities of the sum named are exceeded nearly so much as we frequently find in competition designs.

Looking round the designs in the order of hanging, we have to pass over several before we arrive at any which seem to show special excellence or suitability. "Nos," the first of the set, has certainly a meritorious plan, with good and effective arrangement of the stairs; the design is up to the average merit of the collection, but hardly more. "Faveto linguis" is a finely-executed set of drawings, but the plan is too full of odd angles, the author not having mastered the difficulty of getting rid of these in a convenient manner. "Plenty of Light" seems to have no special claim beyond others to that qualification; it may be described as a Gothic design with Classic detail; the author has aimed at a grandiose effect in his plan, not unsuccessfully, but at some expense of space which might be more practically used. "Lady Day" is a beautiful set of drawings of a design of Classic type, possessing dignity, if no great novelty; but the planning is not equal to the drawing: how does the author propose to light his large vestibule or entrance-hall, which takes up so much space? "Eros" and "Spes" we may pass over; not meaning to infer thereby that they have no merit, but we can only undertake to notice those which come up to a certain standard of plan and design. We may observe, indeed, that the average of merit in this competition is higher than usual in such cases, and those absurdities of design and scheme which are to be found among all sets of competition drawings are in a very small minority here. We next come to "Experience," the author of which has sent two plans, one showing the large hall on the upper floor and in the front block, the other showing it on the ground floor and in the back portion of the plan. The former is very much the best plan, in fact the alternative one is scarcely worth considering in comparison: the author is a thorough master of planning; his centre vestibule takes up some space, but the rest of the plan is so compact and well arranged, and the vestibule itself so well utilised as the centre-point from which every part of the plan can be readily found, that there is nothing to object to in it as to convenience, and the arrangement is very effective. The staircases and lobbies are very well arranged; the large committee-room is placed downstairs, in connexion with the vestry clerk's office, but the idea of a suite of large rooms on the main floor is realised, and the space over the committee-room is made a large ante-room or supper-room, in connexion with the large hall; the manner in which the junction of these two irregularly-placed portions of the plan is effected by a small octagon vestibule intervening in the angle, is admirable. Something must be sacrificed to the extra room on the main floor; it seems to have been taken out in the rooms for the inspector of nuisances and medical officer, which are rather small; if they are practically large enough, however, there scarcely seems a fault to find with this plan. The surveyor's drawing-office is too small, and has the wrong light; this part would require a little re-arrangement. A separate entrance is provided to the public gallery of the large hall. One exterior design is made to serve both plans, which ought not to be, as they are radically different in arrangement; the design is Italian Renaissance, with one or two special decorativ-

features, such as shields for armorial bearings, and a panelled frieze under the cornice; the design is in good taste, but presenting nothing remarkable. Plan is the author's *forte*, and in this he may be said to be among the very best, if not the best among the set.

"Suitability" can only claim mention as an external design of some boldness and originality, though coarse in detail: a plan in which so little resource is shown in dealing with site as to allow one face of the great hall to assume an oblique angle, is not worth another look. The want of perception in regard to this point on the part of some of the competitors, the *nonchalance* with which they allow their principal room to assume the form of a trapezium, instead of getting rid of the odd angles in other ways, is extraordinary, when occurring in connexion with designs so well drawn and got up as to argue considerable experience. "Utility" is a clever elevation, but, again, a bad plan,—all angles and elbows. "To be or not to be" has a plan with some very good points, the offices and staircase approach opening out of a central octagon vestibule, which, however, would be rather deficient in light. The elevation is a square balustraded block of Italian detail, quiet, but not original, though tasteful in detail. "Spero," "Fair Field and no Favour," "T. H." (in a monogram), and "Experiar" are all meritorious plans, with more or less merit in the elevations, the second-named being the most original, but rather too eccentric in some of its detail. "Experiar," however, makes the oversight, which a large number, we think almost the majority, of the plans show, of placing the surveyor's drawing-office with a south light. It seems very odd that gentlemen engaged at the drawing-board themselves should not realise the importance of a good light, and should be oblivious of the excessive inconvenience of drawing at a desk under a south light in the summer months. "Cives" sets a good example in this respect, and the offices and committee department of this plan are well arranged; but the plan is too much cut up with corridors in a rather rambling fashion. The hall and committee-rooms make a *suite* on the principal floor; but the so-called "grand staircase" is very badly placed, and the planning of the approaches to the large hall generally is very faulty. The elevation is a rather florid Italian design, with some spirit and originality of detail; but it would be a very expensive one to carry out with all the decoration shown. "Utility," a second design of the name (No. 21 in the hanging), has the merit, so far as that goes, of representing in its architecture the *genius loci*, being a rather picturesquely-treated exterior of thorough old Kensington type, with a good treatment of angle turrets and windows. The tower, however, is a mere ornament, referable to nothing in the plan, and the latter is not very good.

"Usui Civium" produces an original effect in design by a mingling of Jacobean with more purely Classic features. The entrance-hall would be rather dark, but otherwise the plan combines dignity of effect with practical suitability more fully than most. "Spes" (in two triangles) has a simply-arranged, compact, and convenient plan, and a Queen Anne exterior, looking more like a factory or a prison than anything else. "Cavendo tutus" has, perhaps, the opposite defect of being somewhat too ornate and ambitious in the exterior, a Renaissance design of rather French type, with a good treatment of detail, kept rather flat and in low relief. The plan, with a centre octagon vestibule, aims at effect, but without overlooking convenience; the stairs seem rather far from the entrance, but the whole is symmetrical and well arranged: the windows are, perhaps, rather small. This is a very meritorious design, however, but also a rather expensive one.

"Experientia," like his English namesake "Experience," has his two alternative sets of drawings, each, however, with its own elevation; but the distinction between the two is rather in design than in plan. "Design A" is much the best, and is a very good specimen of the application of Italian Renaissance with some more modern specialities of detail. "B" is a Palladian design, good of its kind; both are admirably drawn, and the labour and care expended over the two sets are remarkable,—we might, perhaps, say melancholy,—to contemplate. We fear the plan has nothing special to recommend it; it is somewhat rambling in construction; not equal, certainly, to a good many others.

"Thorough" is a very clever, almost an amusing instance, of a determination to be Gothic, without employing Gothic detail. The plan has a curious degree of resemblance to one of those by "Experience," but is hardly so good.

"Acanthus" is a very clever picturesque design, of château type, showing much artistic feeling. The arrangement of the plan is peculiar, and differs in some respects from any other in the management of staircases and corridors; the idea seems to us capable of better and more systematic working out, but it is worth attention, and the drawings are admirable.

"If I win I'll crow" is an Italian design of merit and gracefulness, which would deserve more examination if the plan were more practical; but the author has sacrificed everything to an enormous hall running north and south the whole extent of the site, and crowding out the other business departments. His motto is illustrated by a sketch of a cock crowing, perched on a T-square,—a piece of wit which seems to have hit the level of the public mind, judging by the continuous chuckling over it among visitors.

"Well considered" justifies its motto. The design is a fine and dignified one, of a rather Venetian type of Renaissance, with the details very well treated, producing a rich, but not florid *ensemble*. The plan is generally satisfactory, and has some special points; the treatment of the west wall of the hall, for instance, as a segment of a circle, and of the vestry clerk's offices on the floor beneath. Some of the offices might be better lighted.

"A l'Envi" has a Classic elevation very prettily and effectively treated in the centre portion, which, under a brighter sunlight than we often get here, would produce a very pleasing play of light and shade. The plan looks symmetrical, but can hardly be considered very satisfactory in detail, though the manner in which the oblique angles are got over at some points is clever. The hall and committee-rooms form a "principal floor" to themselves, with a separate circular staircase.

"Alpha" is a very able and picturesque Queen Anne design, though with rather more florid treatment in some points than that description would usually imply. The elevation, which is shown in an elaborate pen-shaded drawing, exhibits a brick building with pilasters and large cross-mullioned windows marking the main story. The entrance-hall is rather large, but would be very effective, and the plan is a very good one in the main, and attention is paid to lighting. The whole set of drawings exhibits much ability.

"Utile dulci" is an ambitious and grandiose Italian Renaissance design, beautifully drawn and shaded. The offices are rather sacrificed to the hall, and there is a deficiency of lighting in some parts, but the whole indicates an able and practised hand.

"Xmas," a very fine set of drawings, showing a brick Queen Anne building, with a rusticated ground-story, and above that a story marked by brick pilasters, with pedimented windows between and a quasi-Doric frieze over; over the main cornice is a story which, in Classic design, would be called an attic, very tastefully treated, and the centre is marked by a well-designed open bell-turret. In spite of its mongrel Classic detail, the real feeling of this design is essentially Gothic. The plan is remarkably simple, but it is a simplicity which is the result of study. The hall and committee-rooms on the main floor have a special staircase leading only to them. Some points of the ground-floor plan may be deficient in lighting, but not in important parts.

"Argus" has lost himself in corridors and staircases, and an ingenious arrangement of octagon lobbies, which seems to have pleased him so much as to have quite taken away ninety out of his hundred eyes from studying the arrangement and convenience of the rooms themselves. The elevation is a very pleasing one, with considerable originality, and drawn in a very artistic style.

"Kensington" deserves mention for a design certainly clever, though too odd and eccentric. The plainest elevation (towards Church-court) is the best. The plan is out of the question.

"Old Kensington" is a beautiful set of drawings in the style which the title implies; and the plan is one of the cleverest in the room. The entrances and corridors have been planned with great consideration and ingenuity, so as to keep the traffic of one part of the interior totally separate from that with which it has no connexion, and to take every one almost necessarily to the rooms he wants. The drawing-office is in the wrong light, otherwise this plan is equally able and effective, and may probably contest the palm with "Experience," though on a very different principle. The design is ably and effectively treated in the style (or manner) adopted; but, unfortunately, the angle turret, pleasing as it is, is a glaring sham; it stands upon nothing and refers to nothing. Otherwise, the high merit of this set of drawings is indisputable.

"Octagon" is marked by the bold idea of an octagon vestry-hall, occupying the north-east portion of the site; this is a good shape, perhaps, for a deliberative meeting-room, but then it is a decidedly bad one for purposes of public entertainment or public speaking, to which uses we must assume the hall would from time to time be put. The author must, therefore, we fear, be content with the credit of an original idea, combined with a tolerably well arranged ground plan. The elevation (Renaissance with some "modern touches") has excellent points.

"Audax omnia perpeti" has a good though rather heavy pilastered elevation, with some force of treatment, but which would, perhaps, hardly look so well in execution as in drawing. The plan has nothing especial to recommend it. "Design with Beauty, build in Truth," has the reverse characteristics, a good plan, and a rather ordinary design. "Alpha" has a good and dignified elevation of Florentine type of Renaissance, and there are good points in the plan, but there seems a want of system in its arrangement.

"For a Name" will not, we fear, fulfil its author's ambition, but it is highly creditable to him as a design, as it exhibits a really original and graceful treatment of details founded on Renaissance architecture; parts of the upper story are very pleasing in treatment, though the whole wants a little more force. The plan will hardly do, and seems to argue want of experience.

"Kensington," the second of that name (numbered 64), is a very pleasing elevation of Jacobean leanings; the plan has fine points, as in the rather stately arrangement and combination of the large rooms on the principal floor, but it is very deficient in light in some places, and cannot be considered as a well-arranged plan in detail.

"Fuimus" is the only competitor who cannot resist sending a Gothic elevation, contrary to orders; in connexion with which fact his motto, with its obvious reference to a former state of things, falls on the ear with a melancholy cadence which is quite pathetic. He provides, however, an alternative Renaissance design in compliance with the demands of a cold and stony-hearted committee. Both elevations (on the same plan) are well designed; the Gothic,—thirteenth-century type,—is the best. The plan is a good average one, with no specialty, and seems to waste too much room on corridors, &c. Much trouble has been expended on the drawings, which are very creditable to the author.

Three designs will be premiated and become the property of the Vestry, but with no condition that the author of any one shall be employed to carry out the building; and if one of them is so employed, his premium for all these large quarter-inch scale drawings will merge into the usual 5 per cent., and become a dead loss, as he will have, of course, to begin over again. We can only offer our sincere condolence and sympathy to the sixty-two gentlemen who will not even have the satisfaction of selling their work to the Vestry at a price considerably less (in the case of the second and third premiums, at all events) than the mere value of the time and labour bestowed, and wonder how long architects will be content thus to fill a room with proofs of laborious work, merely to make an exhibition for a committee to bring their friends to?

Liverpool Engineering Society.—On Wednesday evening, the 25th inst., this Society held its usual fortnightly meeting at the Royal Institution, Colquitt-street. Mr. C. Graham Smith, A.I.C.E., president, in the chair. Mr. Alex. Ross, district engineer, London and North-Western Railway, briefly summarised his paper on "Hydraulic Machinery, with special reference to Railway Goods Yards," read at the previous meeting. This was followed by a lengthy discussion, and the general opinion elicited was that hydraulic machinery is convenient, safe, and economical; and that where the machines are irregularly distributed and intermittent in their action, that water is the best means of transmitting power.

THE PRINCE OF WALES AT THE TROCADERO.

DURING the Prince of Wales's short visit to Paris, on his way to and from Nice, he contrived to pass two or three hours at the Palace of the Trocadero, and inspected with the most laudable care the progress of the enormous works. He was conducted throughout his inspection by M. Krantz, the commissioner-general, and M. Berger, commissioner for the foreign sections, to whom he expressed his belief that no possible complication in connexion with Oriental affairs would be likely to interfere in any way, to prevent England taking an active part in the Exhibition.

M. Krantz and M. Berger afterwards breakfasted with his Royal Highness at the British Embassy, in the Rue du Faubourg St. Honoré.

The Prince, in the course of the day, also visited the antique "Ginger-bread Fair" (*foire au pain d'épices*), which this year in Paris has been held with unusual ginger-bread magnificence. His Royal Highness enjoyed immensely his *incognito* in this motley fair,—an *incognito* that was so completely respected that on his entering a somnambulist fortune-teller's magic cell, the sybil said, "You are born under a lucky star, but you have not always been fortunate; and at the moment I speak to you, you have still serious obstacles to deal with. The qualities of your heart have often made you oblige ungrateful persons who would wish to repay by mischief the good you have done them. But persevere in the way which you have chosen, and you will triumph. You will soon inherit a large sum, which will permit you to marry the one you love." The amusement of his Royal Highness was excessive.

It is now quite determined that the Palace of the Trocadero is to remain a permanent building at the close of the Exhibition, the municipality having arranged the purchase of the Palace on certain conditions advantageous to the Parisian public; certain thoroughfares throughout the palace being stipulated for, to be closed only on rare occasions.

The works on the Trocadero, and also on the Champ de Mars, are already in so forward a state that the contractors are nearly two months in advance of their stipulated time, and already may be seen in the Champ de Mars a gigantic movable scaffolding, which is preparing for the erection of the iron work, and, we are told, will not merely be admirable for its constructive strength, but remarkable for its beauty.

The walls of the very large space that has been devoted to the exhibition of the fine arts are all but finished, and present a picturesque appearance in their rough condition, somewhat resembling the gigantic remains of Caracalla's palace near Rome, a resemblance that will very shortly lose its antique charm in the overwhelming attractions of completion and novelty.

The central garden, the delightful feature, it will be remembered, of the Exhibition of 1867, is making rapid progress, but the Parisian horticulturists remove and transplant large trees and shrubs with so much ease that ornamental gardens spring up under their hands like magic. Many Londoners, on visiting this Exhibition next year, will be reminded in this garden of the pleasant little quadrangle attached to the French *annexe* at South Kensington, in which so many Anglo-Indians and *emigrés* did their best to enjoy an outdoor repast.

We find some interesting details concerning the state of the works of the approaching Exhibition in the report of M. Guyon on the Budget of the Ministry of Agriculture and Commerce, from which, amidst a considerable array of figures, we gather that, from September 1st, 1876, to February 28th, 1877, 3,032,000 francs (that is, about 122,000*l.*) have been spent in the works of the Exhibition. It must be taken into consideration, however, that this sum is only *on account*, and represents very imperfectly the expense of the works realised. Since February 15th, twenty-two contracts have been accepted for the left bank (Champ de Mars), of a value of 18,000,000 francs (720,000*l.*), and ten contracts for the right bank (the Trocadero), of the value of 3,000,000 francs (120,000*l.*)

The accidental difficulties which were met with in the underground portions of the Trocadero have exacted a supplementary expense of about 1,000,000 francs (40,000*l.*); but on July 10th next, the two galleries of the wings will be finished, and will be in a sufficient state of dryness for the period when the art-collection will be placed in them.*

The advanced condition of the metallic works precludes any probability of delay, and thus will be raised, in a year's time, on the Champ de Mars, a palace with a superficies of nearly 60 acres.

Paris.

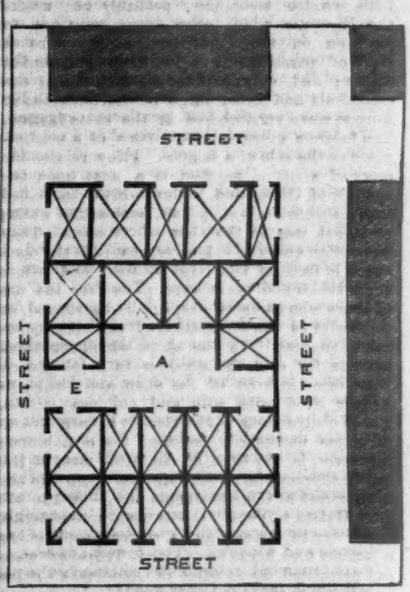
THE HOUSEHOLD AT DIFFERENT ERAS.†

THE CÆSARS, II.

Gibbon agreed with Perrault and Arbuthnot that the polite Augustus had neither glass to his windows nor a shirt to his back.

THE crowded streets and clustered houses of Rome during the hundred years which preceded the death of Nero were the subject of much poetical lamentation; and the allusions to both by prose writers of the time are comparatively numerous. Horace tells of dismal funerals disputing the way with unwieldy carriages; of a mad dog on one side and a mud-begrimed sow on the other. At the same time a crane is being worked upon a new building, and now a stone, now a piece of timber is being raised; while the builder is hurrying along with his mules and carriers. Juvenal complains of the wagons passing in the narrow curves of the streets; of the rich man borne upon the shoulders of his slaves in a litter with shutters closed; of a tide of human beings who stop the way, elbow and trample upon each other; of the litter-pole, the beam, the wine-cask which struck him as he attempted to make a passage. Martial's excuse for not paying the usual visit to his patron was the steepness of the Esquiline Hill, and the path "dirty with footsteps never dry." He could not get clear of the trains of mules and the blocks of marble which were being dragged along by ropes. The noise in the streets, both by night and day, prevented Horace from singing and tracing "the difficult footsteps of the poets." Martial could not live for schoolmasters in the morning, corn-grinders at night, and brasiers' hammers all day and night. "Here," he says, "the money-changer indolently rattles piles of Nero's rough coins on his dirty counter; there a beater of Spanish gold belabours his worn stone with shining mallet." Soldiers, too, never ceased from their clamour; nor was the "sailor, with his piece of wreck hung over his shoulder, ever quiet." The noise and dread of fire prevented people in the meaner streets from sleeping. The houses, lofty and of many stories, with only the lowest walls of brick or masonry, were propped up in places; the upper stories projected over the streets and the internal courts. "Novius is my neighbour, and may be reached from my windows," is the beginning of an Epigram by Martial, who once occupied a single room on a third story; "in the whole city there is no one at once so near and so far from me. . . . If any one wishes not to see Novius, let him become his neighbour or his fellow-lodger." Juvenal, whose only attendant after dark was the moon, or the glimmer of a rushlight, enlarges on the perils of the streets, upon the height of the houses, and the chances of death from some object thrown from open windows when the inmates within happen to be awake. Though arrived safely home, ruin, according to him, still hangs over all the tenants of a lodging-house. "The third story [doubtless the top story] of the house in which you live is already in a blaze; and you are still unconscious!" These are the kind of houses to which Vitruvius referred when he said that in Rome the mass of the people were "commodiously lodged." Some passages in the "Satyricon" of Petronius Arbiter relate to events which are supposed to take place in one of these *insulæ*, as they were termed, in contradistinction to the *domus*, or private house,—the former occupied by several families, groups of people, and individuals; the latter by a single family of wealth and station.

The literal meaning of the word "insula" is an island of shops and clustered dwellings; and the Parisians still use the derivative "îlot" to indicate much the same thing. But eventually the term was employed to denote each house in the island; and ignorance of this undoubted fact was partly at the bottom of the absurd estimates which have been made of the population of Rome. In like manner "insula" and "taberna" have been confounded and supposed to mean the same thing; but as the ground-story of houses in an *insula* most frequently consisted of shops, the confusion is easily explained; for in London at the present day it is usual to talk of a house and shop as a shop only, to distinguish it from a private dwelling-house. The annexed diagram is taken from the Marble Plan (third century); it shows an *insula* which, from its rectangular shape and studied distribution, must have stood in a part of the city carefully laid out after one of the later fires which devastated Rome at different periods of the first century. The principle of plan is that which has developed into the modern *maison-à-loyer* of the chief Continental cities; and in general outline far more resembles that of to-day than similar blocks let by stories and rooms which existed in Edinburgh during the sixteenth and seventeenth centuries, and in Paris during the reign of Louis XIV. A lodging in an *insula* often consisted of one room only; and Juvenal describes Codrus, a poet, living with his wife in one of such rooms. The shops were most frequently one apartment; but there were also some with a room at the back, lighted and entered from the shop. This was a *taberna cum cœnaculo*; and both kinds are shown on the fragment of the Marble Plan which we published in our first chapter of this section. Moreover, in many shops there was a wooden stage, or half



NO SCALE

story, which became in the days of St. Jerome (A.D. 340—420) the "mediana" he refers to in his description of the houses at Rome—ultimately the "mezzanine" of Italy, and the "entresol" of France. The *insulæ* were not occupied, or, more properly, each of the houses composing an *insula* was not occupied, by several persons as joint property; nor were the houses in Rome either of Cicero's time, or of a much later period, mere "lodgings," as the word is now understood in England. They were rather "houses in flats," the rooms of which, compared to modern dwellings, were ridiculously small, and their arrangement deplorably primitive. Each shop, however, was complete in itself, and each dwelling was complete in itself—a mode of residence which, according to Dureau de la Malle, suited the host of *célibataires* who flocked to Rome in search of fortune or a patron. Unfortunately, the diagram we publish has none of those marks upon it which, in other parts of the Marble Plan, and also on the neighbouring *insulæ* we have etched, indicate stairs. It is, therefore, useless to conjecture whether the building was of two or more stories. A is a courtyard, and E is the entrance to it. There are twenty-one tenements in all; those on the outside lighted and entered from the street; those on the inside from the court. Obviously, no remains of similar blocks of building, except, perhaps, the foundations of a few shops, have been found in Rome; but at Pompeii the walls of a complete *insula* are standing. The "House of Pansa," one of the largest in the city, is surrounded on three sides with shops and distinct dwellings; and on the fourth with a portico of two stories facing the garden. It was not a building of more than two stories, and nowhere at Pompeii are there

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* The total sum voted by the Chambers for the Exhibition is equivalent to about a million and a half of our money.

† See page 378, *ante*.

any traces of the tall houses which existed in the crowded parts of Rome. An advertisement, in which a number of houses, shops, &c., are announced to be let, was discovered at Pompeii. They were a source of revenue to many of the upper classes, who owned land and buildings; and the rents—the *merces insularum*, mentioned by Cicero—were collected by an agent, who, in the description given by Petronius, was either a freedman or a slave.

The traces of stairs,—the lowest steps being of stone, and the rest of wood,—are numerous not only in the dwellings which enclose the "House of Pansa," but also in such public buildings as the Baths of Pompeii. In the latter these stairs are approached directly from the street; and their position leaves no doubt that the upper story was divided into dwellings, consisting, most likely, of single rooms called "cœnacula."* The upper story of the celebrated Baths at Baiæ was occupied by well-to-do citizens, who sought relaxation and change at that famous watering-place. In the season these Baths were surrounded by booths and huts erected by small traders often against the very walls of the building. Martial describes one Syriscus wandering about in Rome among the low *tabernæ* "in the neighbourhood of the four Baths,"—presumably those of Agrippa, Nero, Grullus, and Titus. These little wooden structures, probably not unlike the *baraques* which once every year are to be seen on the Paris boulevards, were a kind of parasitical annexe to a substantial edifice; and only a hundred years ago the cathedrals and other large public buildings in Europe were encumbered in the same fashion. The *tabernæ* clung to the portico of a market-place or the side of a temple. Pliny relates the story of a raven, hatched in a nest upon the Temple of Castor and Pollux, which descended into a shoemaker's shop built against the walls; and that was in the time of Tiberius. They were often erected in the *area*, that is, in the open space in front of the large houses; and before them tables and seats were placed for the use of those who came to eat, drink, be shaved, or otherwise as the occupation of the shopkeeper might suggest. In the shops which contained articles for sale, the goods were displayed on trays often in front of the shop, and the shopkeeper lived with wife and children within. These obstructions in the already narrow streets of Rome necessarily impeded the circulation; moreover, in the time of Augustus most of the public thoroughfares were stepped much like the high street at Constantinople now,—up the hill from Galata to Pera. It was usual to be carried in a litter to the city gates, where people going a journey took horse or carriage. Travellers were not permitted, by an edict of Claudius, to drive in a carriage through the towns of Italy; and not until the reign of Domitian were the keepers of *tabernæ* in Rome forbidden to encroach upon the public way.

No contemporary description of a Roman house (*domus*) in the time of the Cæsars is extant; and the only means of knowing, perhaps conjecturing, what the household then resembled, is from diverse and scattered references to its composition, its extent, and to the manners of the time. Vitruvius has drawn a very distinct line between what was required for the residences of different classes of the community,—of trade, finance, the learned profession; and those of the nobility in whom the duties of the magistracy were vested. "The nobles," he says, "should have their houses constructed with splendid vestibules, lofty *atria*, and extensive peristyles; with plantations and spacious walks disposed with every attention to magnificence of appearance. Besides which they should have libraries and picture galleries; and in some instances *basilicæ* upon a scale of grandeur little inferior to that of national buildings, for it often happens that public meetings are held there, and the causes of individuals held and determined." Vitruvius also defines three inferior classes of houses. "Those," he says, "who expose to sale the produce of the country should have shops and stables at the entrances to their houses; and within them store-rooms calculated for the preservation of their merchandise, without any regard to propriety of appearance." Those who farm the revenue are, however, to have houses respectable in appearance, and secured against depredations; while the houses of advocates, and others distinguished for their eloquence, are to be more elegant and spacious, in consequence of the number of people who resort to them for advice and instruction. But the Roman architect who is thought to have dedicated his book to Augustus, and who is certainly mentioned by Pliny, affords little information concerning the size of rooms. He usually defines their proportions by doubling the breadth to obtain the length and so on; and indeed had not the ashes of Vesuvius preserved parts of Pompeii until within comparatively recent times, it would have been difficult to believe in the extreme pettiness of the rooms in Roman dwellings even of the best description.

Some light is thrown upon the duties of household life by an enumeration of the day's labours in the Fourth Book of Martial. He says that the first and second hours of the day exhaust the clients who pay their respects to their patrons; but unfortunately no scholar has yet been able to determine the exact time in modern reckoning which is meant by "the first hour." The clients waited on their patrons a little after dawn. Martial complains, jestingly, that unless Paulus will sleep longer in the morning he cannot accept him as a patron; Pliny started before sunrise to pay his respects to Vespasian. Visits between equals were also paid in the early morning; but morning varies at different seasons, and the only thing about which little doubt can exist is that business was transacted before the mid-day meal, and that the duties of recreation were performed between then and dinner. "The third hour," according to Martial, "exercises the lungs of the noisy pleaders," and during the fifth Rome was variously occupied. At the sixth hour people ate and rested, and the seventh closed the day's work. After that "the games of the oily Palæstra" and the Baths attracted at least the masculine portion of the community; and between four and five o'clock, perhaps in summer at seven o'clock, the last and principal meal took place. "The ninth hour," says Martial "bids us press the piled-up couches at table;" and he doubtless refers to domestic habits during the cooler seasons of the year.

Perhaps the relations of patron and client varied less in the course of years than the form of the *area* or *vestibulum* in which the latter waited. This vestibule formed no part of the house at any period before or during the era of the Cæsars; in early times it was the open and unappropriated space in front of a house, and ultimately it was merely part of the pavement, or, indeed, the public street. Originally the *atrium* was the house itself. The house door, unfastened during the day, was closed at night; and clients wishing to "pay their court" to the master of the house, waited outside the door in the open yard, that is, in the *area* or *vestibulum*. There, if he had any merchandise for sale, he exposed his goods under a shed or within a booth; there lay his horse or his cattle; there his wagon and his litter were secured. There, hawkers of petty wares, of small comestibles and drinks, ensconced themselves. Ultimately, this space was enclosed, shops were erected fronting the street, and a narrow passage between them led into the open yard in front of the house which became the new-fashioned *atrium*; and the house,—the old-fashioned *atrium*,—became the more modern peristyle. Thus, the external façade of even a large house consisted of a row of shops, between two of which a small recess* led to the folding-doors of the *atrium*. In the "House of the Tragic Poet," at Pompeii, these were of wood; they turned upon pivots set in two bronze rings fixed in the door-sill, and they were secured by a portable cross-bar inserted in the door-posts on either side. The janitor, whose province it was to guard the entrance, has been qualified by Horace in one instance as surly, even though a slave; and other poets have deprecated the demeanour of one who was sometimes chained to his post.

The division of the house into two parts was not accompanied, as in Athens, by the enforced seclusion of the women. The Roman wife was not only the nominal mistress of the household; she exercised power at home, and could use her liberty abroad. Except in the morning, when clients and visitors filled the *atrium*, or when guests were lodged in the chambers on either side of it, the house was as much hers as her husband's; and, unlike her Grecian sister, she frequented theatres and amphitheatres; she was treated, if not as an equal, with becoming ceremony by the men. But that she seldom ventured into the public places is certain; and she was probably as rarely seen in the high streets as females of her position in Cairo or Constantinople at the present day. On one of the ruined walls, however, recently found on the Palatine Hill, there is a picture of a woman with a bouquet in her hand, coming out of a house followed by a slave; and above the door is a window through which a man is looking; while on a neighbouring balcony there are two other women. Indeed, the freedom enjoyed by respectable matrons,—the maidens were kept strictly at home,—is so indisputable that the few houses at Pompeii which contain a *gynæconitis* or *venereum*, secluded from observation, are due to the caprice of a few, doubtless, Greeks, rather than to any fashion of the Romans. In the earlier *atria* no such seclusion was possible; and then the wife, even among the better classes, cooked, or superintended the cooking of the meals. Becker's German editor, or his translator, says she "sat enthroned" in the midst of her maids, though what that means we are unable to penetrate; but we do know from Suetonius, that Augustus, so ran the story, seldom wore any garment except one made by the hands of his wife, sister, daughter, or grand-daughter,—which may imply that in the time of Augustus it was usual to make such things at home, and in the time of Suetonius it was possible to buy them ready-made. The same writer adds that Augustus had always clothes and shoes (the latter with heels like those of Louis XIV. to make him taller) in his bed-chamber for any sudden occasion; and the dimensions of a Roman bed-chamber, such as Augustus inhabited, would preclude the possibility of profusion. In the beginning of the first century, clothes, money, jewels, eatables, were kept in wooden chests under charge of the women; or, for greater security, they were sealed. But the rights,—we do not use the word in the exaggerated sense, which is now fashionable,—of the Roman matron could not have been of an exalted character. Even Cicero, who, in his adversity, wrote such pathetic letters to his wife, put her away with apparent facility; and another whom he married, he lent to, some say he divorced for the sake of, a friend. Indeed, the fact that deformed children might be put to death by the father, and the right of "exposing," as in Athens, a new-born child, together with the power he held until death over his sons, point to the undivided sway of the Roman *paterfamilias*.*

The fact that no Roman citizen could serve another, occasioned the purchase and use of captives for domestic service, and the importation ultimately of large numbers of males and females, of all ages, from different parts of the world. A public market was held for their sale, though the younger and better-looking of both sexes were often privately sold. There cannot be any doubt that, when private wealth was at its height, the slaves, even in an ordinary household, were considerable if not enormous in number; moreover, some of these slaves were permitted to cohabit, and others bred without permission. But in the time of Cicero, and in the time of Horace, little or nothing is extant to show that the household slaves were numerous. Pliny's figures are not worth repeating; but those who know how much space is required to lodge a company of soldiers, can judge whether even a hundred slaves would find standing-room in an ordinary *atrium* at Pompeii, supposing the *impluvium* to be full of water, and space left to circulate round it. Even though a poet in the reign of Augustus may have possessed ten slaves, the servants of a young bachelor in the Indian Civil Service exceed that number. The Romans kept a slave for every species of household work; the English in India maintain servants on the same divided principle. But in face of the reputed magnificence of the Cæsars we venture to believe that no one of them, and certainly not Augustus,

* The *cœnaculum* was the early name for a dining-room; it was not till after the subjugation of Greece that *triclinium* was adopted in preference. When houses consisted of only one story, and the house-tops were made like terraces, the *cœna* or dinner was taken there probably in the open. A covering of some sort was extemporised; then perhaps trellis work; and afterwards a more substantial shelter was erected. This became the *cœnaculum*; and eventually all the rooms in an upper story bore that name.

* See Fragment of the Marble Plan, *fig.* 3, p. 311, *ante*.

* The word "familia," even in its restricted sense, included much more than is now ordinarily understood by "family." It means, according to Becker's elucidation, the whole collected society of a house, free and slaves, at the head of which stands a *paterfamilias*. It also means "everything which an independent man has by right *in potestate*, or which is under his control, as well persons as articles of property"; and in the time of Cicero "a Roman family resembled a small state in which the *paterfamilias* ruled with patriarchal authority."

was served with the pomp, profusion, and luxury, which in Calcutta hourly surround a viceroy at Government House. Into the question of those slaves who exercised polite arts it is not now our province to enter. Becker says that the Roman used his slaves for purposes of luxury, not of revenue, as was the custom in Greece; and in the second century such may have been the case. But it is certain that before the time of the Cæsars, and doubtless during their sway, slaves were a source of revenue to their owners. Cicero, writing to Attious about the gladiators the latter had bought, says,—"If you had cared to hire them out you might have cleared your expenses at these two last public shows"; and at that time, according to the researches of Arbuthnot, no slaves sold so dear as stage-players, because they returned large sums of money to their masters.

An acquaintance with the habits of life in different parts of India is almost necessary in order to grasp, however imperfectly, the character of a Roman house and household. Both in Rome in the first century, and in India to-day, the masters are of one race, the servants of other and different races; and the distinction between rulers and ruled is there comparatively as great as it was in Rome. The reserve and desire for seclusion which a European feels at certain times among people of his own nation, disappear in the presence of dependents indubitably inferior. The saying that no man is a hero to his valet applies neither to the ancient world nor to that part of the modern one which retains some of the customs of antiquity. The frequent presence of the naked form insensibly weakens, not innate delicacy, but rather the affectation of modesty which is peculiar only to Western Europe. In an Indian country-house, a curtain which neither ascends to the lintel nor descends to the threshold of a doorway, is often the only barrier between the dining-room common to all the guests, and the bedchamber of each one or of each couple in particular. The bedchambers of the Romans were closed in a similar manner, with this exception, that in India the rooms are comparatively large and the doorways many. In the latter country a great deal of life is spent in the open verandah, and even on the house-top. The life of the Roman was principally a public one, and his private life was passed beneath the open sky, within the enclosure of his own house. The assumption of Mazois that the internal porticos of houses were filled with a transparent stone (a kind of talc), is most improbable. No doubt curtains or drapery of some sort were suspended between the columns, because holes, doubtless for metal rods, were observed in remains of columns at Herculaneum. The doorways were only closed with doors when security was necessary: thus the *tablinum* was provided with folding doors, for there the archives of the master's family and relics of his ancestors were preserved. The idea of privacy even in ceremonies connected with the toilette is not so much of Western as of modern origin. It is unknown in older countries among women, certainly chaste, who will change their only garment, while half immersed in flowing water, under the very eyes of a stranger. It is equally difficult for many—especially in England—to understand how a bright and "useful" hearth can exist without a chimney, or a dinner be cooked without the blaze of a fire. But in spite of Horace's description of the kitchen fire at an inn in Beneventum, from which an attempt has been made to prove that the houses of the Augustan age were provided with chimneys, and in spite of the shaft over the baker's furnace at Pompeii, the little nooks in Roman houses which we call kitchens were used to prepare, not to cook, food. That undoubtedly was performed over a portable brazier, or in some kind of portable oven placed in the peristyle or the *atrium* or outside the house-door. In winter the rooms were warmed by similar though smaller braziers, placed under the porticos and outside the different chambers to permit the escape of the smoke.

The mode, place, and quality of the daily repasts are not subjects of speculation; the only difficulty is to know to what period to apply the various descriptions extant. Of the three meals, the last was the only important one; and their order is similar to that in vogue at the present day in Paris. With the first, eaten just after rising, the wife had probably little to do; it consisted of bread and salt, grapes, olives, &c.; and it was taken, standing or walking, promiscuously, —by the *paterfamilias*, perhaps, in the *atrium* while receiving his clients and visitors. The mid-day meal was sometimes of fish and eggs with wine. The dinner was of several courses; more attention was paid to its composition and more time spent over it than with the Greeks, who hastened to begin the *symposium* which followed, and which was the *convivium* of the Romans. The dining-room of the ordinary house does not seem to modern eyes large enough to entertain numbers; and the injunction never to let the guests exceed nine, three on each divan, had probably more than a poetical signification in the days of Horace. The poet consecrated most of his Odes to the praise of good eating and drinking, and he used the traditional licence when he sang, as Mr. Forsyth has lately rendered it,—

> "For the bard who devotes to nine Muses his life,
> Nine bumpers his portion shall be;
> The Graces, aye fearful of quarrels and strife,
> Forbid you to touch more than three."

But as the houses increased in size and strength the divans were made larger; and then each certainly held more than three people. The *triclinia* were ultimately superseded by a semi-circular divan, just as in some instances the square or oblong peristyle gave way to a circular one, examples of which are graven upon the Marble Plan. A dinner of sixty covers is described in an Epigram of Martial,* but it has all the character of a burlesque. As we have already explained, dinners were often eaten, especially in summer, on the house-tops, and on festive occasions in the *atrium*, or, perhaps, in the garden of the peristyle itself. But that either the *triclinium* or the Grecian *œcus* was generally used for ordinary dinners is certain from allusions made by Suetonius to practices permitted even by the Emperors, and indulged in by their guests. The room was often so oppressive that men changed their dress wet through with perspiration. But the amorous escapades of Augustus, or the offensive manners allowed by Claudian etiquette during dinner, cannot be mentioned here. No evidence of refinement in the accessories of dining and entertaining accompanied the "magnificence" of the Cæsars. The winter *triclinium* was dark; windows were neither agreeable nor safe, and a hole in the roof was not always feasible. Oil-lamps, the flame of which protected by no shade blackened the walls and poisoned the air of the room, were suspended from the ceiling, or fixed upon bronze standards. The diners were crowded together on the divans; they reclined, men and women, with the head towards the central table, the feet pointing from it. The divans upon which they lay were stuffed, and soft cushions were placed loosely upon them. The table was circular, and not much larger than the little round tables in front of a Parisian *café*. It was washed with a sponge between the courses; no cloth† of any size or colour was laid over it. The only linen used at a banquet was a small napkin spread across the breast, and usually brought by the guest himself. When dinner was over, and before the *convivium* began, a chaplet or garland of flowers to twine round the brow was presented to each of the guests; on festive occasions strings of flowers were also worn round the neck, but no such decoration was thought seemly outside the house. During the evening the guests could cleanse their hands upon sponges held by boys for the purpose; and, on arriving, a slave offered water for hands and feet. The question of foot-gear was then obviously a matter of importance; a man going out to dinner walked in shoes, and his slippers or sandals to wear upon the divans were carried after him by a slave. At Trimalchio's banquet the floor was strewn with sawdust, tinged with crocus and vermilion, and with specular stone (talc) beaten to powder, this use of which was an invention of Seneca's day. The slaves sat or squatted at the feet of the guests, from whose fingers torn and broken victuals dropped upon the marble pavement; and Pliny relates that one Pergamus devised a pattern of floor in mosaics which imitated the crumbs and scraps that fell from the dinner-table.

These mosaic pavements "left the ground for the arched roofs of houses, and they are now made of glass,"—that is, of glass mosaics. So says Pliny, who was killed by the same eruption of Vesuvius which destroyed the neighbouring cities. He also adds that in his time gold and marble had taken the place of paintings; that marble mosaics covered the walls; and that in the time of Nero coloured veins and spots were inserted in the marble, to enhance its beauty and variety. The assumed intolerance of the "ancients" for a sham or an imposture, in such small matters as a "blind" door, is confirmed by better authority than a MS. of Pliny. In a house at Pompeii the imitation of a door, 6 ft. wide and 10 ft. high, is painted on a stuccoed wall, to correspond with a real opening on another side. Even the ring which served as a handle to the real door is depicted upon the painted one. The fashion of covering walls of houses with "pleasing landscapes representing villas, porticos, groves, fish-ponds, and seashores," was introduced during the reign of Augustus. In another paragraph from Pliny it is said that the walls are now tapestried with old pictures, and that the portraits of strangers are prized. Horace refers to painted boards or tablets, doubtless signs, hung outside the shops. In his time it was the fashion to suspend on the walls of the *atrium* waxen masks of deceased members of the family, arranged each in its separate niche, with the name and titles of the individual inscribed beneath. But, of course, these were the customs of the great, and Pliny's lament that the masks instead of being made of wax, were of silver, and that they were not taken from the life, or, indeed, resembled at all any of the fortunate owners' ancestors, shows an old fashion succumbing to imitation and consequent imposture. "Not only," says Pliny, with the devotion of an ardent compiler, "do we consecrate in our libraries, in gold and silver, or, at all events, in bronze, those whose immortal spirits hold converse with us in those places, but we even go so far as to reproduce the ideal of features all remembrance of which has ceased to exist."

Now that there seems to be a real desire to return to the study of Grecian and Roman art it will certainly not be inappropriate to remind those who indite rhapsodies about the "ancients" that they must cease to treat of them in sublime disregard of time and space. Any one attempting to describe the arts of the English people during a thousand years of existence would not venture to omit mentioning the period to which he alludes; but the thousand years of historical antiquity,—from the rise of Greece to the fall of Rome,—are jumbled up in ordinary minds with a vague suspicion that the Five Orders of Architecture have, somehow, something to do with periods of transition and change. A few scientific men and several amateurs do, however, pretend to identify peculiarities of Roman workmanship with a certain century or even a certain emperor; and having recently unearthed the foundations of what, once, must have been spacious and beautiful edifices they have been pleased to christen some "The Palace of Cæsar Augustus," and others "The Palace of Tiberius" his successor. But not a tittle of absolute evidence can be produced to show that buildings as substantial as those which must have covered the walls now laid bare on the Palatine Hill existed in the time of the Cæsars. On the contrary there is a great deal of likelihood, even from the hyperbolical and contradictory descriptions of the Palatium extant, that such buildings did not then exist. The burning, the falling in of ill-constructed houses, the insecurity and danger which were felt in the narrow, winding, half barricaded streets in every part of Rome before the great fire of Nero, are mentioned by all kinds of writers. The fires which frequently occurred during the reign of Augustus led to the formation of cohorts of night watchmen. The Cœlian quarter was totally destroyed in A.D. 27; ten years after, the houses on the Aventine Hill were levelled to the ground by a similar disaster. Traces of the fire which happened in the reign of Caligula were visible until that of Vespasian. How many times during the era of the Cæsars was that famous Circus at the foot of the Palatine Hill in flames? At the close of Nero's reign, the whole of the Palatine region was destroyed; and the newly-built, the scientifically-planned city which rose out of ashes, is that to which the Third Satire of Juvenal is pointedly directed. In the second year of the reign of Titus a fire, which lasted three days and three nights, destroyed a large portion of the city: among

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* Mazois made the "Palais de Scaurus" of colossal height, because, much more than a hundred years after, Martial described a glutton, named Santra, mounting to his garret, "up some 200 steps!"—the Roman steps being double, in height of rise, English or French steps. Martial said of himself, "I live up three pairs of stairs, and those steep ones." But a little discretion in culling quotations is useful, even in matters connected with architectural restoration.

† It would be curious to learn whence the custom, hallowed by centuries, of placing a huge white cloth over the table in pictures of the "Lord's Supper" is derived. Yards of canvas have, however, yet to be painted before the world will grasp the anachronism sufficiently to be ashamed of it; and then, perhaps, artistic interest in the subject will have abated.

a host of other public buildings, the Baths of Agrippa, and the Theatres of Balbus and Pompey. But who imagines that the conflagrations and sieges which have taken place in the amphitheatres of Arles and Nimes, and in the theatre of Orange, have contributed even a hundredth part of the ruin they presented at the beginning of this century? Who would hesitate to light a bonfire within the Pantheon? Yet we are gravely asked to believe that solid walls, the foundations of which now lie uncovered upon the Palatine Hill, were not only a constant prey to the flames but that they were literally burnt to the ground. Nor is the celebrated tradition that Augustus transformed Rome from a city of bricks to one of marble without another interpretation which has a moral, not a material, meaning. According to an authority equal to Suetonius, the emperor said:—"Rome, which I found built of mud, I shall leave you firm as a rock." Indeed, the tone with which building-works of marble are described by Pliny shows that even in his time the use of that limestone in domestic architecture was not so general in Rome as to be unworthy of remark or explanation. Moreover the sentiment, shared by Horace and Varro almost equally with Tacitus and Juvenal,—which glorifies the past at the expense of the present,—is almost the ruling passion of a progressive age. But all the pæans sung during an invasion of luxury, all the dirges chanted over early Republican simplicity, are of small value to modern inquiry in the inevitable absence of any means of comparison. Cicero's houses and villas were palaces, as the word is now understood, to one whose eyes could still rest upon the hut of Romulus; Roscius was the greatest actor of his day, but what the standard of merit was then is not and never can be known. In the third century of the Christian era the magnificence of Rome as a city of vast and beautiful buildings is indisputable, but the rise of that magnificence * dates from the close, not the beginning, of the first century; and the tale of architectural splendour during the waning years of the Republic is a myth as complete as any that time and custom have sanctioned.

THE TWO WATER-COLOUR EXHIBITIONS.

THE senior and junior water-colour societies opened to the public simultaneously, on Monday last, two exhibitions of fully the usual, perhaps more than the usual, interest. It is significant to note that the prevalent qualities which mark the two exhibitions respectively are somewhat less contrasted than before; that the lines of the two societies seem to show symptoms of approaching one another more nearly. The change is perhaps more on the part of the younger than of the older society. It may be observed that the Institute collection is smaller numerically than usual; that the small room at the end of their gallery is shut off and the works confined to the large room, where even the screens are not filled. As this cannot result from any deficiency in the number of applicants, we are led to put it down to the adoption of a higher standard. At all events, the standard is becoming a different one; and that it is so is owing in great measure to the "new light" of some of the younger or more recent members or exhibitors. The "drawing-master's" art of blue water, golden skies, and Roman ochre foregrounds,—which one used to suppose might be manufactured in so many yards at a time, and cut off for each exhibition,—occupies a manifestly smaller area on the walls, and must hide its diminished head still more, with the development of so true and manly an art as that shown in the landscapes of Messrs. Collier, Syer, Wimperis, and one or two others, who, let us hope, will soon throw into the shade what may be termed the "Bay of Naples" style. Mr. Collier's "Fittleworth Common" (128) has much of the quality of style which characterised David Cox; it is in a pure and unaffected water-colour style, with no niggling and stippling, and full of the light and air of out-door nature. For the last two or three years Mr. Collier has been *facile princeps* at the Institute in this style, but Mr. Syer in his fine work "The Road over the Moor" (171), which has been judiciously hung as a kind of pendant or balance to Mr. Collier's drawing, runs the latter very hard, exhibiting perhaps greater force and concentration of effect, though less refinement of colour and manner in detail. The landscape "at Broxton, Cheshire" (57), by Mr. Wimperis, is a masterly work; the artist has been very fortunate in his choice of a subject, or rather has shown a true artistic intuition therein. Mr. Orrock holds up the same standard of broad and bold water-colour treatment in his "Drovers crossing a Yorkshire Moor" (43); he has given up making rainbows, and got rid of the mannerism which seemed to threaten in his former works, and become a true and honest painter of nature. How, in the face of this kind of art, certain old contributors can go on sending effects of stage moonlight and gamboge trees every year, and how the committee can go on hanging them, is a mystery; but, as we have said, there is a smaller dose than usual this year, and we must do justice to Mr. Warren, in noticing in his large landscape, "The Vale of Desolation, Wharfdale" (116), a comparative absence of mannerism,—at all events, of the particular mannerism by which we have known his works here lately. Mr. Hargitt shows somewhat new effect and a broader manner than usual in his large landscape entitled "Highland Poachers" (7), which has very fine qualities. One old exhibitor, who has never deviated from the path which his genius has marked out for him, Mr. Hine, still enchants us with the exquisite truth and delicacy of his representations of down scenery, and in his largest work, "The Weald of Sussex" (50), he seems even to surpass his usual excellence. That his drawings are very much alike in style and subject is quite true, but then they are not mannered, any more than nature is mannered; they are always the direct and conscientious transcript of nature in her varied tones and contours, and we no more get tired of looking at them than we get tired of walking out on the downs. Among other landscapes, those of Mr. Reed, Mr. May, and Mr. Penson are to be noticed. The "Entrance to a Pill" (155), by the latter, is a fine work, a view in some wild desolated moorland, but there should really have been a foot-note to tell us what a "Pill" is, unless the word is a misprint.

Somehow we have begun upon the landscapes, but there are one or two figure-pictures of real importance. Mr. Linton's "Ave Maria" (149) shows more of the deep and genuine pathos which we used to recognise in his works than in his last year's drawings, and is up to his highest excellence in regard to rich and sober harmony of colour and careful modelling; unless, in regard to one point, we are right in thinking that the legs of the helmeted soldier seated in the centre of the picture are somewhat short, and are not quite successfully drawn. The subject is the exhibition of a primitive little statue of the Virgin by a benevolent-looking old man to three soldiers. What the man is, and why he exhibits the figures, which he does by opening the door of the small shrine he holds in his hand, is not quite apparent: he sits on the left of the group, regarding them with a countenance the simple piety and solemnity of which are most pathetically rendered. The character of the spectators is well contrasted; one young handsome man who stands a little behind is indifferent; the helmeted figure before mentioned seems to show only a conventional respect; the real devotion is on the part of the hard, bronzed, moustached veteran, whose face tells a tale of no quiet or pacific life, but who at this moment is under the influence of a deep and genuine contrition. As a piece of drawing, the figure of the young girl on the right receiving alms from a rather sleepy-looking woman, is exceedingly true and graceful. The picture is one to be returned to; it shows some of the highest qualities attainable in water-colour art. In strong contrast to this is Mr. C. Green's remarkably able work, "Here they come!" (38), a study on the course at the Derby. The close observation and study given to every separate figure and physiognomy in the crowded scene is something really remarkable; each face seems to have a character of its own, and each figure to be a separate study in drawing and posture. One can hardly call the result a pleasing picture; it is a hard realistic study of personages mostly repellent in type; but it is wonderfully clever.

Mr. Small's "Striking a Bargain, Connemara" (187), is a capital study of Irish character, only wanting, from an artistic point of view, a little breadth of treatment in regard to colour, such as might combine the picture more into one whole. There is fine feeling and composition in Mr. Clausen's "A Tale of the Sea" (174),—an interior rather inky and disagreeable in colour, but with much character in the figures, especially in the fine-looking lass who stands in the centre of the floor absorbed in the story. Mr. Hugh Carter, who is obviously a follower of Israels, reproduces certainly more of the manner than the intellectual quality of his great original; but his drawings are never commonplace; "Le Premier Pas" (58) strikes us as the best. Another palpable imitation, almost amusingly so, is Mr. Staniland's flattering compliment to Mr. Linton in "A Ticklish Errand" (28). Mr. Seymour Lucas's small work, "The Last Purchase" (24),—an old gentleman in the long green coat of the Georgian era examining a picture, is an admirable and original thing; we have seen the green coat before, but it is a very good artistic property. Mr. Corbould has a large drawing of Lady Godiva led out on horseback by her ladies, in which much less is seen of Lady Godiva than usual; fortunately or unfortunately, as people take it. For ourselves we have come to consider her ladyship a nuisance, who should be repressed; indeed, she is generally only a name for a "study of the nude." In the present instance the artist certainly aims at something more, but there is no reality about the scene.

Any one who, entering the other exhibition in Pall-mall East, goes up to Mrs. Allingham's drawing of the Chelsea Hospital Gardens (139), will see something much better than Lady Godiva, in the shape of the two charming modern English girls, brunette and blonde, who form the centre figures of the scene. Though on a small scale, these figures are completely and minutely studied and finished, and seem to us to be simply perfect: nothing more charming could be seen than the figure of the young lady with her profile to the spectator, so handsome and dignified, and yet so gentle-looking. The drawing is of rare excellence throughout; perhaps the effect of the flowers may be a little too strong and spotty in the middle plane of the picture; but otherwise everything is in keeping, and it is worth while to notice how thoroughly studied are even the little figures in the background; the little girl's head seen over the flowers on the right; the various actions of the children who hang about the group of pensioners under the tree, are all separate and individualised studies, though some of them are small enough to go on a sixpence. In a very different way Mr. Walter Duncan's "Love, Scandal, and Politics" (180) may be studied as a figure-subject of a high order. The artist is one of the few who show a disposition and ability for the treatment of abstract and ideal figure-subjects; the present work illustrates, by three groups of half-length figures, the three ideas indicated; the lady in "Love" is hardly as attractive as one might wish, though the figure is by no means a common-place one; the group of three ladies representing "Scandal" shows most delicate *nuances* of expression and character in the faces, and the decorative effect of the whole in regard to colour is exceedingly fine. A small sketch on one of the screens, of a girl asleep (213), gives additional evidence of the artist's power of drawing. We ought to look for much from Mr. Duncan. We have another very interesting figure-subject by Mr. Buckman, whose clever little work in the last year's Academy, of men pulling a rope against each other, attracted some attention. The present work, "The Business of Pleasure" (65) is more serious in aim. The artist calls it "a decorative treatment of a modern subject," but we do not see how it deserves the title "decorative," except from the mere fact that the figures walk in procession nearly in one plane. It represents a party of strolling performers on the march, and the character in their manner and expression must be the result of much study and observation, and combines humour with real feeling. The old fellow with the drum on his back is like one of Dickens's most successful hits, and every figure has its own story to tell. It is gratifying to see in the fine and free drawing of figures and landscape, called "The Guide" (112), that Sir John Gilbert is turning his thoughts to something besides cut-and-thrust paintings of Mediæval *mêlées*. Among other subjects in which figures are prominent may be mentioned Mr. Thorne Waite's "On the way to School" (51), and Mr. Parker's "On the Bank of the Thames" (160), which latter represents a group of children on a

* Mr. Fergusson, in 1874, wrote that "of all the palaces ever built, either in the East or the West, this [that is, the Palace of the Cæsars on the Palatine Mount] was probably the most magnificent and the most gorgeously adorned." Mazois, before him, had written,—"Le palais de Néron peut être regardé comme le terme le plus élevé ou soit jamais parvenue la magnificence Romaine dans les habitations."

bank, fishing, or looking on. There is a great deal of character and good drawing in the figures, but the treatment of the faces, hands, &c., seems somewhat hard and wooden. The contributions of one of the newer members, Mr. Radford, we really complain of. They seem to get more and more hard and uninteresting, and he ought to know that all his ladies have heads too large for them, conveying the idea that he must paint from a model with an over-large head. But the whole of his art, as far as we can see, is nothing but manipulation.

Among landscapes, what is good is very good, though there is, perhaps, more of mediocre or conventional work than we usually see in this gallery. Some old contributors are in unusual force; Mr. G. A. Fripp, for instance, whose "Mountains at the Head of Loch Eynart" (97), is equal to anything we have seen of his, especially fine in the delineation of what may be called the anatomy of the mountains, without losing aërial effect; and Mr. A. P. Newton, whose "Unveiling of the Mountain" (42), representing the mist clearing suddenly aside from a great snow-covered mass in the centre of the picture, is in his finest vein, notwithstanding a little conventionalism in the foreground. His small drawing of "The Upper End of Loch Torridon" (282), should be looked at also. Mr. Naftel and Mr. Dodgson, whose art moves in narrower limits, are nevertheless admirable in their own style, perhaps above their usual standard. Mr. H. Moore's "Sunset in the Highlands" (12), would never be taken for his at first glance; the manner of it is unusual with him, and the effect puzzling at first; but it only needs to be studied to indicate itself as a remarkable work, in which every touch has its motive, and there is a wonderful degree of air in the evening sky seen over the dark shoulder of the hill. Mr. Powell, in addition to some small studies, sends "A Gale off the Coast of Arran" (26), in which he almost surpasses himself in the drawing of sea-water in motion. So truthful are the lines and movement of the water, that we almost expect the dark wrinkled mass in the foreground to pass away behind the frame, and the succeeding wave to roll up to us: the wild effect of the distance, half lost in rain and mist, is fine also; it is a great work, which impresses us the more we look on it. As a contrast, go from this to Mr. Boyce's two small quiet scenes, "In Dunster Park" (206), and "A Mill-pool in Surrey" (276), drawings which are for a contemplative moment, and require careful examination to realise all the delicate truth of tone and detail that is in them—the faint shadows on the grass in the one, the admirable perspective of the other, which crowds so much into a mere strip of the paper. Mr. Clarence Whaite's large drawing "The Castle Rock in the Vale of St. John's" (168), is unquestionably grand in effect, in spite of the mannerism of colour which, less obtrusive here than in some others of his works, the artist seems unable to get clear of. All the drawings by Mr. Davidson are good, and in a good style; the largest, "A Common,—Carting Heather" (87) has qualities which recall the older English school of landscape, as represented by Crome and others. Mr. Albert Goodwin is not altogether at his best; the most elaborate of his drawings, "Water Babies" (71) may be regarded as a pendant to his "Mermaid's Cave" (we think that was the title) last year; the effect is a little too artificial, which can rarely be said of this artist, the local colour of objects in the foreground being obviously sacrificed to give more effect to the semi-transparent brown tones of the water. The small drawing called "Veiled Sunlight" (68), with its tender gleam of light over a nook of a country village, shows the artist's highest qualities better, as also the view of "An old English Town" (45), in which it is noticeable how completely we can trace the road into the town, and the construction of the place, so that we fancy we could walk into it; and this reality is obtained without the slightest hardness or sacrifice of aërial effect. Mr. Alfred Fripp is well represented by one or two important drawings; yet his very charming view on the "Coast of Dorsetshire" (138), bright and delicate as it is, will not compare for real nature with the two last-mentioned small works of his younger compeer: with all it merits, there is just that *soupçon* of picture-making, of artificial tone and effect, about it, which takes away some of our satisfaction in contemplating it.

We should have mentioned a drawing by Mr. Tadema, "An Interesting Scroll" (218) perused by a seated Roman youth, which, however, is not (for him) a work of importance. Mr. Arthur Hopkins's study of a team of cart-horses in "The Plough" (82), foreshortened and coming up a bank towards the spectator, is admirable of its kind; and among "Still Life" drawings, of which there are not many, Mr. Brewtnall's "Geraniums and Wall-Flowers" (199), in a green jar, is excellent, and a much more satisfactory work than his more ambitious subjects are.

NEW STREETS AND STREET IMPROVEMENTS, PROMOTED BY THE METROPOLITAN BOARD OF WORKS.

SUGGESTED MODIFICATIONS AND EXTENSIONS.*

I SHALL not pursue the growth of London from humble beginnings in remote ages, nor even dwell upon the improvements effected after the Great Fire by Wren and his coadjutor, Hook, the land surveyor. They accomplished much, though private interests interfered, as they too commonly do, with the public good. But no more great fires can be expected, and as the recurrence from time to time of some great rectifying motive is advantageous, a comprehensive Streets Bill ought to be welcome. The scope of that now before Parliament is certainly immense. The task is too Herculean for even the sedulous promoters to contemplate without apprehension, and they accordingly propose no less a term than seven years for preliminary arrangements and ten years for actual fulfilment of these undertakings. It may be assumed that the proposals are in many instances of self-proclaimed utility, and that the outlay will not be incommensurate; but no one person whatever could perhaps give an equal judgment on them all, varying as they necessarily do in extent and urgency as well as situation. It is far at least from my intention to attempt so great a task. I do not forget that the Metropolitan Board of Works has achieved many great results, will in all probability effect many others, and maintain a well-earned popularity. Nor can the public confidence, of which popularity is the expression, have a better foundation than a knowledge that the measures proposed by the Board would stand a far severer test than a fair and candid review by a body of British architects.

My long and cherished connexion with the architect of the Nelson Column, and a yet more extended occupation almost under its shadow, give me a vivid interest in all that concerns Trafalgar-square, and the important section of town of which that square is the focus. As a part of the aggregate capital the West End has a very distinctive character. It is the seat of the Court, the Legislature, and the Government, the abode of Fashion, and the home of Learning, Science, and the Arts. Non-commercial, ornate, stately, it is regarded with pride by every British subject, and taken as the standard of comparison with other capitals. It contains the most venerated shrines of Christian antiquities in the country, and many memorable works by our leading architects, from Inigo Jones to Scott. Go from the Regent's Park to Pall Mall, from St. James's-street to Charing-cross, from the Nelson Column to the Houses of Parliament, and from Westminster Abbey to Victoria Station; thence, proceed, if you will, through Belgrave-square, till Mr. Burton's entrances to the Royal Parks and the Marble Arch may be almost seen at the same moment, and Piccadilly to the Circus. What a throng of impressions may thus be formed—what a store of reminiscences called up! It is surely a place where even an amending hand should be reverently and cautiously applied.

Victoria Station exemplifies in a striking way the changed methods of locomotion. The bason of a tidal canal has suddenly become a stage of platforms, rails, and trains, and a scene of the utmost activity is constantly presented. It is an almost universal centre for home and Continental travel. The number of omnibuses that arrive and depart is very considerable, and affords a ready index to the direction of street traffic. One line has a service every fifth minute in the direction of Paddington and Kilburn; another of the same frequency takes the Strand, Clerkenwell, and Islington. A third, with twenty departures in the hour, has its route through Parliament-street, St. Martin's-lane, and Tottenham-court-road. There is also a short line to Oxford-circus by Piccadilly and Bond-street. A separate line from southern Pimlico to the City passes along Whitehall and the Strand. Between Lambeth and Oxford-street several lines of omnibus pass Charing-cross, so that Parliament-street and the somewhat picturesque way between the Admiralty and the statue of Charles I. are already becoming too narrow. The omnibuses, of which alone I have spoken, are mere, though I think reliable, indicators of the general concourse of every kind, whether by vehicle, horse, or foot.

But while it is apparent that Charing-cross must be thronged, I find that, after a very persistent struggle, an omnibus plying in another direction,—namely, between Victoria and Old Ford,—has been discontinued. My inference consequently is,—and it is confirmed by inquiries into the postal correspondence,—that between the north-east and south-west districts the direct correspondence is very small indeed. It would, therefore, occasion no appreciable inconvenience if the proposed junction of Hart-street, Bloomsbury, and Piccadilly were at least postponed for a term, during which convincing statistics might, if necessary, be obtained, and more urgent operations effected. I may, therefore, dismiss street No. 1, and the contemplated demolition of some of Nash's work at the circus. The widening of Dudley-street would also be saved.

With regard to the major intercourse between the City and the West, I shall confine myself to the Piccadilly line, since the Oxford-street route, which may be said to reach from Acton to Cheapside, makes the northern boundary of the district I have perambulated, and is not itself affected.

Assuming that all the traffic from the west has arrived at Regent-circus, part may be expected to turn northward into the Quadrant. On the south there are two very capital roads, namely, Regent-street and the Haymarket, though it is objected that the latter, not being trumpet-mouthed, abuts rather abruptly on Piccadilly. Both are carried, by means of Pall-mall and Cockspur-street, easily down to Charing-cross, Northumberland-avenue, and Whitehall. But no continuing road of adequate capacity is presented from the end of Piccadilly eastward; and all who wish to reach Somerset House or Temple Bar are subjected to a painful waste of time and labour by the Charing-cross detour and a descent of 40 ft.

The difficulties in the way of a direct street from Piccadilly to Somerset House or St. Clement's Church appear insuperable, so that instead of a stem we must put up with branches. One of these has so obvious a direction along Orange-street and Hemming's-row as to admit of no alternative; but it may be as well to recite the clause of the Bill which provides for a new street, No. 3, commencing at the eastern side of Regent-circus, Piccadilly, "by the widening of Piccadilly on the north side; then by the widening of Coventry-street on the south side, and the widening of Prince's-street on the west side; and thence by a short length of new street from the south end of Prince's-street to St. Martin's-street at its junction with Blue Cross-street; thence by the widening of Orange-street on both sides, and by a widening of Hemming's-row on the south side, and terminating at the east end of Hemming's-row, in the parish of St. Martin-in-the-Fields."

I cannot help suggesting, as of superior directness and effect, a street of easy curvature, from the top of the Haymarket to St. Martin's-street, combined with the removal of the close and unsuitable buildings between this new street and Leicester-square, so that Leicester-square, of which the face has been so completely changed by an act of private munificence, may be to some extent enlarged, and the value of the liberal step alluded to enhanced. Points of economy should hardly have too much consideration here, any more than in a people's park, an embankment, or an avenue. What better return can be had than embellishments, of which all feel proud and none grudge the cost? What higher profit can be sought than the moderate extension here proposed of a public,—yes, essentially a people's square?

In connexion with this part of the scheme, I should wish the block of public buildings comprising the National Gallery and St. George's Barracks to be made insular, and a street of communication to be opened between Leicester and Trafalgar squares. Those among us who work in a sort of mental perspective, and form their ideas as it were in stereotype, will, I have no doubt, perceive some eligible chances here. As to the effect of a reduction in the length of

* Substance of a paper read before the Royal Institute of British Architects, on Monday evening last, by Mr. Thomas Morris, Associate.

the National Gallery, I think the elevation would bear it very well. The design is rather attenuated and deficient in height, so that it would be benefited by compression of the extremeties. The end in St. Martin's-place is a fine composition, and might be well repeated at the west. The south front is open to the objection that on either side of the central portico, in which (it may be remembered by some) the columns of Carlton House were applied, a group of three windows is thrice repeated, which I should say is once too often. By bringing the ante together, therefore, omitting the last three windows that separate them, the design would be strengthened, and a good part of the space for the suggested opening obtained.

Then from the north end of Leicester-square, where Bear-street and Cecil-court now are, I should propose a short street into St. Martin's-lane.

Not on account of this street alone, but having in view the increased traffic through Leicester-square and Long-acre, on the opening of the new Law Courts, I should retain and exercise the powers for widening Coventry-street on the south side.

We may now consider the thoroughfares in the direction of north and south, or from Westminster to Bloomsbury, whether existing, proposed in the Bill, or here first suggested.

The Bill provides a new street (No. 6) commencing in Trafalgar-square, at its south-east corner, to be formed partly by widening the roadway on the eastern side of the square by widening St. Martin's-place; thence by a short line of new street commencing at Hemming's-row, and terminating at Castle-street; thence by widening Castle-street partly on the east and partly on the west sides; thence by a new street from the north end of Castle-street crossing Prince's-row, Lichfield-street, Grafton-street, and Moor-street to the south end of Crown-street; thence by widening Crown-street on the east and partly on the west sides, and terminating at Tottenham-court-road.

Now, to my mind, though with all deference to Lord Bacon's precept about the purpose of houses, Trafalgar-square is a place to look at and contemplate at leisure, just as Parliament-square and the river-side gardens, studded with memorials of distinguished men, are becoming. Its buildings, if not æsthetically unassailable, constitute a very noble assemblage, and the number and scale of its embellishments promote its stately character. The gradient is fortunately too steep and dangerous for a large accession of miscellaneous traffic (no prudent driver shoots the square without previously skidding his wheels), and danger, though it sounds anomalous, may prove, like the stylobate of St. Martin's Church, a protecting obstacle.

An excellent road might be formed with the greatest imaginable facility at the east of the church by widening the west side of Adelaide-street; and were that street continued southwards across Northumberland-avenue to Scotland-yard, and by a curve just saving the statue of James II. opened into Whitehall at Montagu House, a new and convenient way would be obtained. The Chapel Royal would be insulated and more favourably displayed, as it unquestionably deserves; for this edifice, by our earliest great master of Renaissance, is as precious as the most valued contemporary picture, and should be framed in a border of unoccupied space. We talk of vandalism, indeed, but what desecration could be worse than making this monumental edifice the neighbour and boundary of stables? In my plan, I indicate a planted enclosure on the site of Gwydyr House. The Crown estate would be advantageously developed, and opportunities afforded for departmental offices or official residences. A dual way is needed here, but has not hitherto been practicable, nor will the opportunity remain after the appropriation of Northumberland-avenue to other objects.

In its northern extension Adelaide-street would penetrate the close region of Bedfordbury, through which it would also be desirable to extend Agar-street as well as Henrietta-street, giving an additional access to Covent-garden, and affording several square and open sites for buildings on the model or artisan plan.

Reaching by a curve the south end of Upper St. Martin's-lane, that short but capacious way is utilised, and from its north end I should widen on both sides Little and Great St. Andrew streets. Then from Broad-street I should adopt the line of the Bill to Hart-street, and extend it to the British Museum, which is rather too important an institution to be wholly ignored. Notwithstanding the vast concourse of visitors it attracts, it remains apart from any direct line of public conveyances. The privilege of exercising private rights and obstructing by barriers what are in every other sense public ways, closes the passage through Gower-street. Such impediments must in time be removed; but they are in the mean time as obnoxious and hurtful as the tolls charged till now by the builders of bridges, and with much less show of reason.

I consider this improved way through Seven Dials preferable to the line of the Bill, because it would suit the traffic from Hart-street, which may be little in common with that from the British Museum and district beyond, which no doubt is and will continue to be large, whether bound for Piccadilly or Charing-cross. The expensive measure projected would not effect a saving in distance of 200 yards as compared with the Cranbourne-street route for a possibly limited number of passengers to Piccadilly. It does not, like New Oxford-street, fill an obvious want by connecting two great streams of business, while the other takes Charing-cross Station, and forms part of the line to Victoria.

In the formation of new thoroughfares at this time, it is a fatal mistake to omit the principal railway stations, for they are centres of intercourse to which the traffic of the future will necessarily tend, and to which the streets must perforce have reference.

There remains for consideration the way to Tottenham-court-road, for which, instead of the line of the Bill taking one side of Crown-street for its centre, I should project a branch from near Seven Dials. The principle by which I am guided in fixing this line is the direct extension of Tottenham-court-road.

Were this road continued in a right line it would enter the Strand at Bedford-street, and there are circumstances that render such an event far from impossible. From King-street to Maiden-lane Bedford-street is of very fair width, though the widening of the southern parts remains a desideratum, but the extension northwards from King-street to St. Andrew-street seems already partly prepared for. The line, besides, has advantages of its own, and would open out a new thoroughfare of value, both for ventilation and traffic. It would pass on the south of St. Giles's Church, and help to display that edifice. I have adopted the St. Andrew-street route on account of the great fitness of the line, but in densely-peopled localities the formation of new ways disturbs fewer occupations than the amendment of old ones.

No abler executive than the Metropolitan Board of Works can be imagined, but with regard to those deliberate and artistic functions on which the convenience, dignity, and grace of districts may depend through many coming generations, might, I humbly think, be referred with no sacrifice of propriety to such a body as this Institute.

In reference to the subject of cost, it is obvious that an indifferent line may be as expensive as a good one; but that which is most direct will also be most economical.

MESSRS. DOULTON'S NEW PREMISES, LAMBETH.

VISIT OF THE ARCHITECTURAL ASSOCIATION.

ON Saturday afternoon last the Architectural Association paid a visit to the extensive premises which Messrs. Doulton are now erecting overlooking the Albert Embankment, about a quarter of a mile higher up the river than Lambeth Bridge. The buildings * are, for several reasons, more noteworthy than manufacturing premises usually are. Seen from the river or from the Millbank shore they already present an imposing appearance. Primarily they are, of course, intended to subserve business and manufacturing requirements, but Messrs. Doulton, as manufacturers of terra-cotta and faïence, have very wisely, even regarded from a mere business point of view (although æsthetic considerations have had due weight, as it is unnecessary to say to those who know anything of the firm and its products in the shape of art pottery), determined that the buildings shall serve the secondary purpose, if such it can be considered, of showing the adaptability of their products for architectural treatment. It was their original intention to have the buildings erected by contract, but finding there would be much difficulty in adjusting the conditions of a contract in regard to the artistic work to be executed, they decided to erect the buildings themselves, under the superintendence of the manager of their engineering department, Mr. John Phillips, C.E. The buildings visited on Saturday last were, during the latter part of last year, the scene of the (as we ventured to say at the time,* and as we still think) unjustifiable strike of bricklayers because two men, said to have been plasterers by apprenticeship, but who subsequently attained great proficiency in the special skill required in the adjustment and setting of architectural details in terra-cotta, were not withdrawn from doing the work for which they were most competent, the contention on the part of the bricklayers being that the setting of terra-cotta was bricklayers' work, and not plasterers'. So, perhaps, it may be—if they can do it properly, which is a disputed point. How the strike defeated itself,—how, in spite of "picketing," Messrs. Doulton were by degrees able to obtain bricklayers to carry on their work, until eventually the "pickets" were withdrawn, are matters known to our readers; but it is probably owing to Messrs. Doulton being free from contract engagements,—being, that is to say, their own builders,—that the strike was successfully resisted. Another point in which the buildings are especially noteworthy is the excellence of the materials employed, and of the workmanship with which those materials have been put together.

Proceeding to give a brief description of the buildings, we must first of all state that they consist of two nearly square blocks, known as "Block A" and "Block B," separated from each other by a roadway (40 ft. wide) leading to other premises of Messrs. Doulton. Block A measures 84 ft. by 81 ft., and Block B is about 80 ft. square. The style adopted may be described as Venetian Gothic, freely treated, and the dominant colour in both blocks is given by the red facing bricks of the walls, these bricks coming from a place called Rowland's Castle, in Hampshire. All details, such as strings, mullions, jambs, friezes, columns, caps, bases, voussoirs, &c., are in terra-cotta and faïence, buff, red, brown, and otherwise coloured, and all have been specially designed and executed by Messrs. Doulton themselves. No stone whatever is used in the buildings except for the staircases. Block A (the one nearest to Lambeth Bridge) has its central portion recessed about 2 ft. The principal entrance is through a porch opening into a projecting bay occupying the ground-floor portion of this recess, and is very richly treated. Above this porch, and springing from the first-floor level, is a highly-ornamental oriel, which is carried right up to the top of the building, terminating with a spire rising to a height of 120 ft. These constitute the chief features of the principal façade of Block A, but it may be stated that the whole frontage is very richly treated. The side and back elevations are as richly treated as the front one, with the exception of the omission of the entrance porch and oriel; and this remark applies to both blocks. Block A consists of a basement about two-thirds below ground-line; ground-floor, with floor-level about 4 ft. above ground-line; first, second, and third floors; besides a series of rooms in the roofs. The basement will be well lighted, and will have an area space all round it. Each block will be completely isolated from the other by the central road before referred to, and there will be no communication between them, either by means of subway from basement to basement, or by means of a bridge connecting an upper floor of one building with the corresponding floor of the other one. Block A is to be entirely devoted to sanitary appliances of all kinds, such as water-closets, urinals, baths, lavatories, &c. On the basement floor there will be a boiler for supplying steam to an engine of about 25-horse power for actuating the machinery used in the workshops on the upper floors, and the remainder of the basement will be utilised for storage purposes. Entering the porch before referred to the visitor will pass through a small lobby into a reception or waiting room, whence access will be gained to the large showroom, 80 ft. by 50 ft. by about 20 ft. high. This room will be lighted on three of its sides directly from the windows, but the central part of the rear portion of this room will be lighted by a skylight which forms the bottom of a square well, 24 ft. by

* In addition to the buildings here described, Messrs. Doulton are erecting a new block of buildings to be appropriated to the purposes of offices and studios, at the corner of High-street, Lambeth. Of this block of buildings we gave a description and view in the last volume of the *Builder*, pp. 1192, 1195.

* *Builder*, 1876, p. 931.

21 ft., the well being continued upwards from the skylight in question open to the sky, and lined with white glazed bricks supplied by the Farnley Iron Company. Round this show-room will be an ornamental continuous gallery. The internal embellishments of this show-room and of the reception-room already referred to will be highly ornate, and will partake somewhat of the character of the decorations of the Ceramic galleries and the Refreshment-room at the South Kensington Museum. In this show-room will be exhibited all kinds of sanitary appliances, and in niches or spaces beneath the gallery and elsewhere it is intended to fit up baths, lavatories, water-closets, &c., as they are when ready for use, with water laid on so as to enable visitors easily to appreciate the "points" in each speciality. Occupying the centre of the back portion of the ground floor is the upper part of the engine-room and boiler-room, on either side of which are clerks' offices. The first, second, and third floors are devoted to workshops, admirably lighted, not only from the windows on all four sides of the building, but from windows opening into each side of the well-hole already referred to. There will be a further series of workshops in the roofs. At each angle of both Blocks A and B will be a kind of mansard or turret roof surmounted by iron cresting. These towers (one of those in Block A being used to mask the chimney-shaft of the furnace of the boiler referred to, the chimney-shaft being, in fact, carried up inside the mansard or turret) will extend to the height of about 100 ft. from the ground, and will be the same height in each building, both blocks being of the same height, and having their fenestration to correspond as to height, width, and distance apart of the openings. The general architectural treatment of both blocks is very similar, the principal difference being that in the main façade of Block B the central portion projects slightly instead of being recessed, and has its entrance, which will be chiefly used by workpeople, less ornate than the entrance to Block A. On the south façade of Block B is a similar oriel to that in Block A, and this is carried up and terminated at the height of 130 ft., in the form of a square spire which has had its point cut off and replaced by iron cresting. The reason for this is that the chimney-shaft from the boiler in the basement of Block B is carried up inside, and concealed by the spire in question, just as the chimney-shaft in Block A has been already described as being carried up inside one of the mansards or turrets of that structure. A staircase communicating from top to bottom of the building winds round this chimney-shaft. Block B is entirely devoted to the manufacture of art pottery, such as Doulton ware, faïence, terra-cotta, &c. In the basement will be a boiler 27 ft. long by 7 ft. 6 in. in diameter, the heated products from the furnaces being utilised, before escaping up the concealed shaft already referred to, by being made to traverse a flue which passes through a clay-drying chamber in the basement. The steam from the boiler is passed through pipes which heat the drying-rooms for modelled clay. These drying-rooms are provided one above another in the centre of the ground and superposed floors, occupying, in fact, nearly the same position in Block B as the well-hole occupies in Block A. On the north side of the clay-drying chamber is a large room for mixing the clay, which is passed on to the various floors by means of a lift. The south side of the basement will be used for storage. On the ground-floor will be a large workshop extending through the height of two floors, in which will be modelled large pieces of terra-cotta, such as figures, &c. These large blocks of clay will be placed on trolleys while being modelled, and when the modelling is completed, the work will be run into the drying-room preparatory to its being fired, kilns for which purpose will be erected on the south side of Block B, and approached from the modelling-room through two archways provided for the purpose. The mezzanine over the ground-floor in the northern half of Block B will probably be used as a showroom for art pottery. It is 82 ft. long by 27 ft. wide, and has two large bay-windows, one in the centre of the north front, and another at the eastern end. The first, second, and third floors are devoted to workshops, with drying-rooms in the centre, while the roof will be utilised for a series of rooms for studios, stores, &c. Want of space precludes us from entering more fully into detail with regard to these fine buildings. We may, however, add that the roofs will be covered with red tiles, supplied from the Pen-y-bont Brick and Tile Works, Ruabon; these tiles are hard and non-porous, having a vitreous surface, and an ornamental effect is obtained by cutting off the two lower angles of each tile quadrant-wise, so that the lower edges of the tiles when put together form a series of half circles. The iron girders and columns are being supplied by Messrs. Matthew T. Shaw & Co., and the lifts (one in each building) are by Ellington. The brickwork throughout is of stocks, faced externally, as before stated, with red bricks from Hampshire. The mortar is made of grey stone lime, coarse sand, broken brickbats, and cinders from the furnace, ground up by an edge-runner. We can only, in conclusion, just mention that at the extreme south end of the building, *i.e.*, the end nearest Vauxhall Bridge, there will be a fine chimney-shaft for carrying off the smoke from the kilns of which we have already spoken. This chimney-shaft will rise to a height of 220 ft., and, partaking somewhat of the character of a campanile, will be unique certainly as to its ornamentation, and probably as to some details of its construction. It will be square externally, but the shaft proper will be cylindrical, and lined with firebricks, with a specially designed air-space in the thickness of the cylinder for ventilation, with the view of counteracting the effects of expansion and contraction. We cannot enter further into details now, and will conclude by saying that externally the chimney-shaft will harmonise with the two blocks of buildings which we have roughly described, being of red bricks ornamented with stoneware, faïence, and terra-cotta of various colours. In short, it promises to be *the* feature of this part of the river-side.

NEW RAILWAY WORKS IN THE METROPOLIS.

FEW persons have little more than a faint idea of the enormous extent and magnitude of the railway works at this moment in progress within the metropolitan area. It is estimated that the cost of the several undertakings of this character now going forward in London, in connexion with the various lines having their termini in the metropolis, is upwards of six millions sterling, and that no less than twenty thousand artisans and others are engaged upon them.

The Great Northern Company alone are expending upwards of 500,000*l.* in the construction of two new tunnels near Holloway, in addition to a very considerable enlargement of the King's-cross Station, which has just been completed, at a large outlay, Messrs. Cubitt being the contractors.

Not far from this locality the London and North-Western Company have, during the last year or two, been engaged in the construction of a new tunnel, 1,180 yards in length, at Primrose-hill. With the exception of about 150 yards, this tunnel is now completed, the whole of the retaining-walls on each side having been finished, and it is intended to open it for traffic in June. The tunnel has cost a little more than 250,000*l.* The company have likewise just commenced the erection of large goods warehouses at Broad-street, which will cost upwards of 80,000*l.*

The Midland Company are also engaged in the construction of very extensive works at different points within the metropolis. Amongst these may be named the large depôt and goods warehouses which have for some time past been in course of erection on the site of Whitecross-street prison, and in immediate connexion with the Metropolitan Railway, near Moorgate-street. The land alone cost the company 200,000*l.*, and the works, including the construction of the depôt, and the erection of the warehouses, will involve an outlay of 120,000*l.* The works are now almost completed, and the depôt will shortly be opened for the merchandise traffic of the company. Another undertaking which the Midland Company have just commenced is the construction of a shipping basin and wharf at Poplar, on the site of Messrs. Wigram's shipbuilding yard, eight acres in extent, for which the company gave 110,000*l.* The cost of the works, including wharfs, river walls, warehouses and sheds, and branch railways in connexion, is estimated at 300,000*l.*; and in connexion with this undertaking the Great Eastern and London and Blackwall companies are jointly making a new branch railway from Bow to the London and Blackwall main line at Limehouse.

The Great Eastern Company are carrying out very large and costly works of a varied character in the neighbourhood of Stratford, for the better accommodation of the traffic. The works consist of new duplicate lines, and station buildings. When completed there will be four lines of rails for the traffic between certain points. Two of these will be for the main-line traffic, and two for the Woolwich traffic and the local traffic beyond. The company are likewise expending a large amount in the conversion of the Bishopsgate Station for goods traffic. The alterations at the station include the re-arrangement of a large number of arches which it is stated will secure the company a rental of 4,000*l.* a year.

The North London Company are also engaged in carrying out new works which will cost 200,000*l.* The principal portion of these works consists of a new dock at Poplar, upon which a large sum has been already expended.

When the East London line was in course of construction between Wapping and its junction near Liverpool-street, a large piece of land was purchased by the company near Whitechapel for the purpose of erecting a goods station and warehouses in connexion with the Great Eastern line, and the East London Company have just commenced the construction of the works.

The works which have for some time been in progress by the South-Western Company for the purpose of enlarging their Waterloo Station, and the extension lines, workshops, and buildings, at Nine Elms and Battersea, are of a very comprehensive character. These works have already cost more than 200,000*l.*, and by the time of their completion the outlay will have reached 400,000*l.* Messrs. Perry & Co. are the contractors for the works at Waterloo, and also for the workshops and buildings at Nine Elms, and Mr. Shaw, of Earl-street, Westminster, is contractor for the Nine Elms extensions.

The new line which the Metropolitan District Company are constructing between their Hammersmith Station and the Shaftesbury-road Station of the South-Western line for the purpose of giving the District Company access to Richmond, will cost more than 300,000*l.* It is to be opened in May next. Messrs. Aird & Lucas are the contractors.

DWELLINGS OF THE BOSNIACS.

IN Bosnia, as in most of the provinces in Eastern Europe, Turks and Christians look far more to cheapness than excellence in what they purchase, and good workmanship and conscientious labour are neither appreciated nor encouraged. The consequence is that the quality of the work executed by workmen is miserably inferior. The workmen are far from being competent in their several departments. The native carpenter begins by purchasing a few rough tools, and working under the superintendence and in aid of a more experienced workman, and in a few months considers himself a master of his trade. When a house is being built, or any work done in which day-labour is paid for, it is usual for the employer to overlook the workmen the whole day, or to pay some one else to do this. They appear to have no sense of honour, and even when overlooked their principal object is to do as little work in the longest time possible. When our consul, Mr. Holmes, first arrived at Bosna Serai he ordered a cupboard to be made by a native carpenter, and to his surprise the cupboard was produced fastened together with huge wooden pegs. Dovetailing and glue were beyond the art of the carpenter, and the boards exhibited all the marks of the primitive plane which had been used on them. There are a few Austrian carpenters who execute ordinarily good work, but they are all drunkards, being like most of the foreign settlers in Bosnia, the dregs of the country from which they come. No artisans of any trade or class, native or foreign, seem to take a pride in their work. There is no emulation, but each gets what work he can, exacts the highest possible price for it, and usually executes it in the most slovenly and inefficient manner.

The dwellings of the Bosniacs are, as may be supposed, ill-constructed, and unfit for the climate. They are built of sun-dried bricks and wood. The walls of the upper part of the house are of the thickness of one brick. The rooms are surrounded by open verandahs, on which all the doors open, and two sides of each room consist of rows of badly-fitting windows. On the ground-floor the walls are generally thicker, and one room is there set apart for the winter habitation of the whole family, where they eat, sleep, and live habitually. A large stove maintains a heat which, to strangers, is insupportable; and

as the crevices in the window-fittings are pasted over with paper, and the windows rarely, if ever, opened during the winter, the atmosphere, as may be supposed, is extremely unwholesome. The upper part of the house is abandoned, and is only used in summer. These are the habitations of the better class. The houses of the poorer are mere hovels, without any kind of comfort or accommodation, situated in the midst of reeking filth, and as unhealthy as overcrowded and air-poisoned dwellings can possibly be. The drainage is most incomplete, and dirt and filth are left to accumulate in all directions. Whenever the cholera or other epidemic declares itself, the people in the poorer and consequently more crowded and unhealthy quarters are decimated.

The wages of those trades which chiefly offer employment to foreign workmen are,—Native carpenter 2s. per diem, foreign carpenter 4s. 2d.; native bricklayer 2s., foreign 3s. 4d.; native tailor 2s., foreign 4s. per diem. A labourer of the country earns about 1s. 2d. For these wages a workman can live, and perhaps save money, provided he is content with native food and lodging, but not otherwise. This consists chiefly of coarse bread, of which even the best is gritty, from the bad millstones used in grinding, and full of other seeds; a few cheap and coarse vegetables of a common species; very rarely meat or poultry, and lodging which an English mechanic would consider uninhabitable. Mutton is only fair during a couple of months in the autumn and is not killed at all during the winter months. The best of the cattle are exported, and the animals killed for consumption are those which can work no longer or are likely to become useless or unsaleable from ill-health. Native butter is very bad and unfit to eat, the cheese is flavourless, and milk is poor and watered. Fruit is abundant and cheap; but as it is gathered before it is ripe, it is to a European uneatable and unwholesome.

THE CRYSTAL PALACE SCHOOL OF PRACTICAL ENGINEERING.

THE thirteenth term of the school closed on Saturday, when a large number of the friends of the scholars and of the school attended.

After the work of the students in the several departments had been examined, the company proceeded to the Lecture-room of the school, in the south tower of the Palace, under the presidency of Mr. James Brunlees, M.C.Inst.C.E., who presented the certificates that had been awarded, and made an appropriate speech to the students.

Thirty-seven students attended the lectures of the term, of whom twenty-two received certificates as having satisfactorily passed examination. The highest number of marks attainable in this examination is 238. J. R. Millidge was first, with 204 marks; A. R. Sennett, second, 202 marks; H. U. Wollaston, third, 194 marks. Each of these twenty-two students had a second certificate for merit in a special department.

Twelve certificates were awarded for merit in the Drawing-office,—C. W. Carrington, first; J. S. Boyer and T. E. Fuller, equal seconds; and W. J. Christie, third. Thirteen certificates were awarded for work in the pattern and smith's shop,—E. Daniel, first; G. F. Hardy, second; G. B. Jenyns, third. Ten certificates were awarded for work in the fitting-shop,—G. S. Firth and A. R. Sennett, equal firsts; T. R. Millidge and L. W. Toms, equal seconds; H. W. Wollaston, third.

In the Civil Engineering section, first term, the order of merit was,—S. R. Lowcock, first; C. W. James, second; H. V. R. Reed, third. Second term, eight certificates,—E. R. Royston and H. Wilson, equal firsts; A. B. Black, second; and A. Keeling, third.

The Forthcoming Sewage Conference.—In view of the sewage conference, which is to be held at the hall of the Society of Arts, John-street, Adelphi, under the presidency of the Right Hon. J. Stansfeld, M.P., on Thursday next and following days, the council of the Society of Arts have instructed Mr. Gilbert R. Redgrave to visit some of the principal towns in Lancashire and Yorkshire, and to prepare a report upon the dry systems of dealing with sewage and the various processes now in operation for the manufacture of manures from excreta.

THE GROSVENOR GALLERY.

THE Grosvenor Gallery in New Bond-street is to open on the 1st of May. As many of our readers know, it has been erected by Sir Coutts Lindsay, himself an accomplished amateur artist, in a spirit of enterprise which is surpassed, in the opinion of many, only by the discretion and good taste observed throughout. The buildings themselves have cost about 30,000*l.*, the total outlay, including freehold site, amounting to no less than 120,000*l.*; but it is understood that the property included not absolutely required for the galleries will return a percentage on this amount irrespective of the takings at the doors. The principal façade is in New Bond-street, and occupies the sites of three houses. The style is Italian Renaissance, harmonising with the central feature on the ground floor, the handsome entrance doorway, which is reputed to be the work of Palladio, and formerly belonged to the Church of S. Lucia at Venice. This doorway was bought by Sir Coutts Lindsay, and is executed in Istrian marble, with two columns of jasper marble on either side. On each side of this entrance will be a shop. The façade will be four stories high, the material used being Portland stone, highly enriched.* At present only one of the side shops is in progress, and the façade is only about half-way up, but this incompleteness of the exterior will not materially interfere with the galleries themselves. Entering from New Bond-street, the visitor will pass through a handsome vestibule, flanked with marble columns, to the staircase, 15 ft. wide, with niches for statues on either side. Ascending the stairs the galleries will be reached. The principal gallery is a fine apartment, 104 ft. long by 35 ft. wide, with the corners at one end cut off or "canted." The smaller gallery is 60 ft. long by 30 ft. wide. In addition to these there is a third gallery, with top-lighted recesses for the reception of statuary, and beyond this again a small room for the exhibition of water-colour drawings. The roof of the principal gallery is coved at the sides, and divided into bays painted a deep blue, each bay or panel ornamented with a representation of the moon in one phase or another, accompanied in each case by stars of different magnitudes. The bays of this coved ceiling of course range with the bays or panels into which the walls themselves are divided. This division is effected by sixteen Ionic pilasters, of oak, richly gilt, which came from the *foyer* of the old Italian Opera House in Paris. The roof principals were originally designed with tie-rods, but these have been omitted, their absence being compensated for by rods passing down behind the coved portion of the ceiling into the brickwork of the external walls. The walls themselves are built in Portland cement; in fact, throughout the whole of the building cement is used to the exclusion of mortar. Externally the walls of the galleries are faced with glazed red and white bricks. Internally they are battened with 2-in. battening, which has served for the fixture of a surface of 1-in. boarding, thus leaving a space of 2 in. between the walls and the boarding. This boarding has in its turn been completely covered with a thick waterproof felting paper, and on this has been stretched and fastened a very rich crimson silk damask from Lyons, this one item of silk wall-covering alone having cost about 1,000*l.* Precaution has thus been taken to insure dryness in the walls, and it may be here noted that it is not intended to crowd the pictures close together, but to leave a margin of wall-space between the frames of contiguous pictures. The floors are fireproof, on Phillips's principle, and will be ultimately covered with Arrowsmith's parquetry, although this will not be completed in time for the opening of the gallery. Ventilation is secured by means of galvanised iron louvres, opening by means of cords to any extent desirable, on either side of the continuous glazed lanterns or skylights of the galleries. Internally the space into which these louvres open is covered with perforated zinc, the unsightliness of which has been obviated by a happy thought of Sir Coutts Lindsay, who has himself painted a number of panels each containing two small doorways covered with the perforated zinc. On either side of these doorways are figures of cherubs and *amorini*, some engaged in holding festoons of fruit and flowers across the doorways. Although there is necessarily a certain amount of sameness throughout these panels, each having its two doorways and its floral festoons, each is differently treated as to the figures, and the effect is very pleasing. Ventilation is assisted by the arrangements made for the admission of warm fresh air in winter, and cool air in summer. Fresh air will be drawn down flues from the top of the building, and will pass into a calefactory or heating apparatus, and thence by other flues to the galleries, through perforated metal panels in the skirting-boards. In hot weather the fresh air will be made to pass through iced spray instead of through the calefactory. The smaller gallery will partake of the general characteristics of the larger one. Both will be illuminated at night by continuous rows of gas-jets, lighted by travelling lamps, on the same principle as that adopted at the South Kensington Museum and elsewhere; and blinds are provided for excluding the direct rays of the sun.

Beneath the principal gallery is a large dining-room, 96 ft. by 35 ft. 6 in. This is divided into what, if we were speaking of a church, we should call nave and aisles, by two rows of Scagliola columns with gilt capitals. These columns are sixteen in number, eight on each side, and are used only for ornamental effect; for, although they come underneath the main girders supporting the gallery floor above, they can be removed at any time without structural detriment. They will serve to facilitate the grouping of the furniture into compartments or bays. Adjoining the dining-room is a commodious buffet for those who wish to obtain light refreshments. In the basement are the kitchens and concomitant offices, replete with every convenience. The entrance to the restaurant portion of the building will be distinct from that to the "Gallery" proper. It will thus be seen that while Sir Coutts Lindsay has provided a series of galleries in which the æsthetic faculty may be ministered to, he has not been unmindful of the more material wants of mankind. It is stated that some of the leading members of the Royal Academy will support Sir Coutts Lindsay in his enterprise, among them being Sir Francis Grant, the president of the Academy, Mr. Millais, Mr. Leighton, Mr. Poynter, Mr. Watts, Mr. Leslie, and Mr. Alma Tadema, and it is also announced that the undertaking has not been prompted by any spirit of animosity or jealous rivalry with the old-established societies of artists. For revenue, we believe it is intended to rely almost entirely on the ordinary shilling admissions, as exhibitors will not be charged for space, nor will they be expected to pay percentages on sales. It is contemplated to ultimately extend the scope of the galleries to music, and ample ground has been secured on which to build a large concert-hall.

The architect from whose plans, and under whose superintendence, the buildings have been erected, is Mr. William T. Sams, and the builders are Messrs. G. H. & A. Bywaters. The works were only commenced in July last, and were greatly impeded not only by the heavy rains of the past winter, but by the numerous injunctions applied for by adjoining property owners, who were desirous of maintaining their ancient lights unimpaired. The work has not been done by contract, but by "measure and value," the surveyors employed being Messrs. J. & A. E. Bull. The Scagliola columns before referred to were supplied by Messrs. Bellman & Ivey; the gas-fittings and cooking apparatus were supplied and fitted by Messrs. Jones Brothers, Down-street; the plastering is by Mr. McManus, of Kensington; the heating and hot-water apparatus was supplied and fixed by Messrs. Herring & Son, Chertsey; and the ironwork was supplied by Mr. Bryant. Mr. Laidler was the clerk of works. We are told that the paints and enamels of the Silicate Paint Company have been used throughout the whole of the building.

The public will have reason to thank Sir Coutts Lindsay for a new pleasure.

* Of this we shall give a view hereafter.

A Casket.—The Baptist Missionary Society are about to present to their late secretary, Dr. Underhill, a testimonial, in the form of a casket of fine gold, of the Cinque-cento style, designed and manufactured by Mr. J. W. Benson, of Ludgate-hill. The obverse side contains a carved view, in ivory, of Benares. In the pilasters of the casket are introduced the sugar-canes, Indian corn, the vine, and bamboo. At the four corners are carved figures, in ivory, representing natives of Brittany, Jamaica, China, and India.

THE GROSVENOR GALLERY NEW BOND STREET, LONDON BUILT FOR SIR COUTTS LINDSAY, BART——Mr William Thomas Sams, Architect.

THE ART-UNION OF LONDON DISTRIBUTION.

THE annual general meeting of the members of the Art-Union of London was held on Tuesday last at Willis's Rooms, St. James's, for the purpose of receiving the Council's report, and for the distribution of the amount subscribed for the purchase of works of art for the current year. Lord Houghton, the president, occupied the chair.

Mr. T. S. Watson, secretary, read the report of the Council, the most salient points of which are as follow:—

The Council have to report to the subscribers that the sum collected, for the year just closed, amounts to 15,586*l.* 4*s.* The great depression in every branch of commerce, in all parts which has for a long time prevailed, and other well-known causes, led to the expectation, that our funds would sustain a greater decline than is thus shown from the unexampled amount produced by the exceptional attractions of the engraving given for the last two years.

A design for a Tazza in bronze, founded on Schiller's poem of "The Driver," was made for the Society, by Mr. Worrell, and a number of these will form part of the prizes to be allotted to-day.

In reference to the China Tazzas, which were given as prizes at the last distribution, the Council have to bespeak the indulgence of those members to whom they were allotted. Unforeseen impediments arose in consequence of the entirely new *form* which the potter was called on to produce, technical difficulties connected with the baking had to be surmounted, and a great many casts were spoilt in the process, before success could be achieved. A perfect work has now been secured, and, in a very short time, all those entitled to copies will be in possession of them.

The following is a brief summary of the receipts and expenditure; a detailed account will, as usual, be printed in the report:—

Amount of subscriptions		£15,586	4 0
Allotted for prizes.....	£7,810 0 0		
Set apart towards providing works of art for accumulated payments	626 10 0		
For print of the year, almanack, exhibition, report, &c., and reserve.....	4,474 12 10		
		12,911	2 10
Agents' commission and charges, advertisements, printing, postage, &c.....		2,675	1 2
		£15,586	4 0

The amount to be expended on prizes will be thus allotted:—

40	works at	£10 each.
30	"	15 "
26	"	20 "
20	"	25 "
16	"	35 "
14	"	40 "
12	"	45 "
10	"	50 "
8	"	60 "
6	"	75 "
5	"	100 "
3	"	150 "
2	"	200 "

Mr. Armitage's oil painting of "Joseph and Mary," £400.

To these will be added:—

A painting on pottery, by P. Levin, of an allegory of "Faith."
6 Bronze Statuettes, "Cimabué."
20 China Tazzas.
10 Porcelain Statuettes, "Net-mending."
25 Bronze "Diver" Tazzas.
100 Statuettes, "Whittington."
20 Folios of Autotypes from the Society's Prints.
30 Silver Medals of W. Mulready, R.A., by G. G. Adams.
40 Volumes of Etchings.

These, with the prizes given to unsuccessful members of ten years' standing, will make the total number of prizes 701.

Since the last annual meeting the Council have lost, by death, one of its most useful and energetic members. Mr. William Smith died suddenly, on the 6th September last, when returning from the funeral of a friend. By the death of this distinguished art-antiquary the public are great losers. Famous throughout Europe for his knowledge of engravings, and above all for profound learning with regard to portraits, Mr. Smith devoted all the leisure of his later life to the service of those whose pursuits were like his own. Few men could approach him in extent and accuracy of knowledge. In England, France, Germany, and Holland his name is widely known as a collector of prints and drawings; and he was one of the best judges of prints on record. He was for many years deputy chairman of the National Portrait Gallery. He devoted much time and attention to the affairs of this Society, and great assistance was derived from his thorough practical knowledge. . . . .

In addition to the vacancy in the Council caused by the death of Mr. Smith, the Rev. Ed. Coleridge and C. J. Leaf, esq., retire. R. H. S. Vyvyan, esq., J.P., and Arthur Grote, esq., have been elected Members of the Council, subject to the confirmation of this meeting.

The members are aware that, on the incorporation of the Society by royal charter in 1847, a reserve fund was established, to be formed by putting aside every year 2½ per cent. of the total amount of subscriptions,—by the accruing interest of the amount thus acquired,—by the balance on the sale of catalogues at the exhibition,—and by the amount unexpended by prizeholders. The total sum thus accumulated now amounts to upwards of 26,000*l.* This reserve was declared to be made "for the purpose of purchasing or building a gallery, and for providing a permanent fund for assisting in carrying out the objects of the Society."

The house now occupied by the Association has long been found inadequate to the proper display of the collection of works of art of various kinds, forming the stock of the Art-Union, as well as the operations involved in the convenient packing and despatch of the large amount of engravings and prize-works which have, each year, to be distributed to every part of the world; and, after considering several sites, which presented themselves, and which had, for one reason or another, to be rejected, the Council have succeeded in acquiring a piece of ground in the Strand, adjoining the Savoy, of an average width of about 36 ft. by 65 ft. in depth, on a lease for eighty years, from the Duchy of Lancaster, on which it is proposed to erect a building suitable in all respects to the Society's wants. The able advice and services of Mr. Ed. Barry, R.A., have been secured, as architect of the building, and it is expected that, in a few months, a new start will be made, in a new home, in which, increased prosperity may be hoped for commensurate with the enlarged facilities thus afforded for developing the objects of the Association.

In their report, in the year 1873, the Council felt bound to notice numerous schemes "which borrow the name of Art-Union, and improperly seek to avail themselves of the services of the Society's agents, although such projects were never contemplated by those who framed the Act of Parliament by which our proceedings are sanctioned."

The Council now feel it their duty to remark on a somewhat similar matter, which, in the last few months, has attained very large proportions. So great, of late years, has been the supply, through the agency of this Society, and kindred means, of really good impressions of high-class engravings, that it is difficult to find a house of any class that has not one or more of such examples to adorn its sitting-room; and yet, by playing on the natural tendency of human nature to take any bait that is covered by some outward show of mystery or ceremony, a host of schemes has been set on foot, with the effect of spreading broadcast, through the land, a flood of miserable ghosts of impressions from utterly worn-out plates, by engravers, who would have shuddered at the notion that their works would ever be so abused. . . . .

The Council would not have it supposed that they desire to monopolise the production of cheap art. Let art be as *cheap* as practicable, so that it be decidedly *good*. We gladly hail the productions of such works as the *Art Journal*, the *Portfolio*, the *Illustrated News*, the *Graphic*,—which constantly bring out good engravings, at a very low price; but we feel that we should not be doing our duty, in the position which this Society has attained, unless we sent forth a cry against the issue of such generally worthless productions as those to which we have above alluded.

The great popularity which attended the first appearance of the marine subjects, "Tilbury Fort," "Dutch Trawlers," and the small prints of Coast Scenery; and which continues to cause frequent demands for them; induced the Council to think that another plate, of a similar kind, might be acceptable to the subscribers, and they arranged with Mr. Edward Duncan, one of the first artists in that kind of subject, to produce for them a drawing, "The Return of the Life Boat"; from which Mr. Arthur Willmore has made a most interesting and effective plate; being of the same size as "Dutch Trawlers," and an appropriate pendant to that work. The drawing itself will be the first prize in the distribution next year. The scene is laid off the Yorkshire coast, near the entrance of Whitby Harbour; a wrecked vessel is seen in the distance, and in the foreground is the life-boat, having on board the rescued crew, so near that a line is being thrown to the crowd of men standing, ready and anxious, to haul the boat on shore. . . . .

Amongst the notable events of the past year was the opening of the Great International Exhibition, at Philadelphia, on the centenary day of the birth of the Great Republic; and it cannot be denied that, for vastness, and interest in the objects exhibited, it has not been surpassed by any undertaking of a similar kind. As far as mere novelty and freshness go, no such undertaking can well compare, to English people at least, with our own Exhibition of 1851. Everything was then new and striking; the idea, the building, its decorations, and its contents; and more than all, perhaps, the additional charm that was felt, from the fact of the Royal patronage accorded to it, and from the intimate personal interest taken in it by the much-lamented Prince Consort. It would be obviously impossible to repeat or rival such an exhibition as this was, all things helping and aiding it; and, in respect of want of novelty, all subsequent enterprises of the kind labour at a disadvantage.

However, this particular Philadelphia show seems to have been an undoubted success, and, to Englishmen especially, a most gratifying circumstance was the greeting afforded by the loud and often-repeated shouts of congratulation of the American public when the awards to the English contributors were announced, showing how completely every feeling of soreness which it cannot be denied survived for many years the declaration of independence of the mother country, has given place to friendship and affection in the breasts of our cousins across the Atlantic.

One evidence of this feeling was the prominent place given to Messrs. Doulton's fine terra-cotta reproduction of Mr. John Bell's magnificent group of "America," from the base of the Albert Memorial in Hyde Park. Thinking that the production of a reduced copy of this group would be a success as a work of art, the Council have commissioned Mr. Bell to make a reduction of the work for the Art-Union. This will be cast in bronze, and repetitions of it will form prizes in a future distribution.

It has been urged by some that because the excellence of the works produced by the artists of old arose from the circumstance that each lovingly studied out, and executed the object of his labour, there should be none of the reproduction by mechanical means which prevails in the present day.

Those who would thus limit the production of objects of beauty are in a kind of dream which ignores the fact of the increase of population. It would, no doubt, be a happy state of things if each household could possess one or more examples of works of art, exhibiting the individual phase of mind and treatment of an individual artist; and in some Utopia, where the number of households, and the individual means of paying for production, bore some proportion to the number of artists qualified to produce; to which, in the times of Greece and Rome, there may have been an approach, this condition might be attainable; but in these prosaic days we have to awake to the fact that the people craving for works to adorn their dwelling-places are numbered by millions, and in this, as in politics and many other matters, we are forced to put up with a compromise, and to ask whether, since only one person may have the means or the inclination to become the possessor of a beautiful vase in gold at a cost say of 500*l.*, other one thousand persons are not each to have a reproduction of the same work in electro-deposit, the whole number of copies not costing more than that sum.

Benvenuto Cellini made his beautiful ram's head cup, doubtless for one of his rich and noble patrons, and probably made no repetition of it; are we therefore to be debarred the pleasure derived by hundreds of persons from the possession of one of the admirable copies of this work which are now to be had? Only one bust of "Clytie" probably was ever chiselled by the author of it: is it a reason for not producing the thousands of excellent copies of the work distributed by this Society, that we may not, in each case, be able to preserve quite that full amount of life and spirit which could be imparted only by the hand of the first producer?

A considerable amount of public attention has been drawn to some remarks not long since made by Mr. E. J. Poynter, R.A., on the present state of art and art-manufacture in this country, at this moment, which appear to coincide with the views of the Rev. Mark Pattison, Rector of Lincoln, who expressed his belief that art in England had retrograded rather than advanced during the last thirty or forty years. To oppose to these views we have the authority of a nobleman, who, as an accomplished man of the world, occupying a high position in the country, has had the best opportunities for studying the subject. Earl Granville, in an address to the students at the Dover School of Art, maintained that taste in this country has materially *improved* during the above period, and, to any one who recalls the designs on carpets, curtains, wall-papers, china ornaments, and the ordinary crockery-ware of every-day use twenty or thirty years ago, and compares them with what are now to be seen in the shops, it must be at once evident that the improvement in point of taste is very great and very wide-spread. Of course, too many ugly things are still produced. Good taste is not a plant of rapid growth, but it would be as logical to argue that because there are still to be found spots from which disease, in one form or another, is never absent, therefore all our sanitary laws and preventive measures have been thrown away, as to assert that the occasional appearance of objects in bad taste proves that all our art-teaching has been in vain.

Can it be maintained that the number of exhibitions of pictures now, compared with twenty years since—that the distribution of thousands of "pictures, and hundreds of thousands of engravings by this society, have had no effect on public taste?

Ample evidence of the great advance in the matter of design will be found in the engravings of objects of art-manufacture given from time to time in the *Art Journal*, whose able conductor has devoted so much energy, judgment, and zeal, to the improvement of the arts of this country, and who, more especially, succeeded, by preserving attack, in driving from the market those spurious imitations of old masters, which alone found purchasers amongst our art-collectors thirty years ago; in place of which fabulous prices are now paid for the works of British artists, both of present and past times, and for this, if it were the only good thing he had done, Mr Carter Hall deserves a large amount of gratitude from the artists of this country. At the time named not a manufacturer, whether of textile fabrics, ceramic ware, or metal work, had a regular artist in his employ; all patterns were either imported direct from abroad, or were clumsily made up of parts from existing designs. Now there is not a large firm of manufacturers of almost any kind that has not its artists' room, where several designers are continually at work to supply the wants of the establishment. It is true that at an earlier period Wedgwood employed Flaxman to make designs for his pottery, but this only makes the neglect of similar means at the time named the more remarkable.

Enormous efforts have been made in England during the last thirty years to compete with France, and these efforts have been successful,—successful beyond hope, when we consider that public art-education in France is the growth of centuries, and that it was unknown in England half a century ago. Yet we are told that all our labours have produced fruit more worthless than that of the Dead Sea. It is not to be denied that to the Science and Art Department is due, in a considerable degree, the improvement which has taken place. The authorities there are called upon to adjudicate annually on many thousands of original drawings, awarding prizes to the most meritorious,—*i.e.*, the most practically useful. How many such were produced in this kingdom thirty years ago? Perhaps on this subject the opinion of a foreigner will carry more weight than that of many natives; and this is what was said, a short time since, in a periodical of the highest reputation in Paris, called *L'Art*. It began by saying that "twenty years ago the French were our superiors in art, and that in all that related to the arts and manufactures they were uncontested." Then "we are not in that position *now*. The manufactures in England, thanks to their merchants, thanks to the models which are cast into the country, thanks to their schools of design, are improving every day to an extent which you will hardly believe possible."

Closely bearing on this subject were some remarks lately made in a leading journal, that "the amusements sought by the people at set times, such as Christmas and Easter, and the spirit in which they are conducted, are, perhaps, better evidence of the progress they are making towards a higher or a lower style of life than can be gathered from their serious employments. We think it is observable that a much higher class of recreation is rapidly making way among the working people."

"There is a far more common yearning for the beauties of nature than was not long since the case amongst them. The entertainments which appear to excite most interest, and to draw together the largest crowds, were precisely those which were more than others intellectual in character."

"These facts appear to us to indicate quite as rapid a growth as could have been expected from the means which the nation is at no small expense, employing to educate the people."

"It may be calculated that every year draughts off, from a lower to a higher social state, an appreciable number of those who have received the advantage of our public elementary schools, and the various provisions which have been made in almost every populous place for the recreation of the masses who are daily immured in the cares and toils of life. The work remaining to be done is, truly, heavy enough, and will demand time for its success. But our labour has not been in vain. We have only to persevere in order to reach the goal of our best and most patriotic aims."

Lord Houghton.—I rise to move the adoption of the report, in my capacity as president of this excellent institution. I shall detain you but a

very few moments from the far more interesting occupation of finding out whether you are prize-holders or not. The report is extremely interesting, as you will see when you have it in your hands. It does not, however, state the large increase in the number of our subscribers which came in with a rush at the last moment. I think I am correct in saying that this year there was an increase of about four thousand subscribers, from various parts of the country, within a very few hours. These are days of surprises, and I only wish that all surprises we have to undergo were as agreeable as this. The report records the death of that excellent art-antiquary, Mr. William Smith, who was one of the most useful and energetic members of our Council. He was a very original man, and only this morning I heard of a curious instance of the vivacity of his appreciation of anything good. A sculptor, who happens to bear my name, was taking to the South Kensington Museum a small bust for the Byron competition. It was modelled in clay, and he was taking it there to compare it with some engravings. Mr. Smith happened to see it, and asked "What have you got there?" The sculptor showed him. "This," said Mr. Smith, "is the best bust of Lord Byron I have ever seen. But you must come and see my engravings,"—alluding to a splendid collection of portraits of the poet which he possessed. My friend only this morning told me how much he regretted the sudden death of Mr. Smith, and he added that it was strange he should have had the chance of making the acquaintance of such a distinguished man so suddenly, and that he should so suddenly have lost him. I will not enlarge upon what has been said in the report about the abuse of the name of "art-union," which has been unworthily taken advantage of for the sake of distributing throughout the country a very large number of inferior prints. I hope that the effect of the exposure of this imposture—for such it must be called—will be to increase the anxiety of all persons who wish to get good value for their money to join this, the true Art-Union, where they are sure, at any rate, to get something not only worth their money, but something that will be of advantage in the culture of themselves and their families. You have heard that the subject now to be put in hand for our next engraving is "The Return of the Lifeboat." You will remember the popularity of "Tilbury Fort" and "Dutch Trawlers." This engraving of the lifeboat will carry into thousands of English homes the memory of that interesting event which occurred on the sea coast of the county to which I belong, namely, at Whitby, in Yorkshire, where a schooner, attempting to enter the harbour in a heavy surf, went ashore south of the harbour's mouth. I myself saw that stranded vessel after the crew had been rescued by the wonderful efforts of the lifeboat men of the town. Perhaps there is no form of human energy more interesting than is afforded by such an incident, and there is no occasion on which the valour, the endurance, and the power of the English sailor—the power of self-sacrifice, of feelings of real humanity, and of a sense of duty—are shown to greater advantage. Such deeds are only equalled by that of those brave miners over whose destiny the interest of England has been watching for the last ten days. Allusion is made in the report to the International Exhibition at Philadelphia. I was not present there myself, but I was in America a short time before, and I was very much struck with the circumstance that in almost every well-to-do house in that country you will find some interesting works of art. You hear a good deal said about the love of the American people for material interests, for nothing but the "Almighty Dollar"; but if they use the "Almighty Dollar" in the purchase of works of art I am sure they are doing great good to themselves while at the same time they are spreading a sympathy for art and culture throughout that wonderful domain of English-speaking people. Every year there go forth from this country to what may almost be called the uttermost wilds of the earth myriad representations of the art and ingenuity of England. Not only does the Art-Union itself supply a considerable number of its own works to America, but I have no doubt, for instance, that from the wonderful collection which will be sold at the end of this week opposite * here, some examples, as is the case with every great art sale, will find their way across the Atlantic. I will merely say, in conclusion, that in the contest between Mr. Poynter and Mr. Mark Pattison on the one side, and Lord Granville on the other, my sympathies, and my knowledge as far as it goes, are all on the side of Lord Granville. It is not only extremely improbable in itself that all the efforts in the way of art-culture in England should have been entirely useless, but I cannot conceive that any person who mixes with the people of this country in any large sense can really believe that the popular taste for art has deteriorated within the last twenty years, knowing myself the utter meanness, poverty, and want of interest, that were exhibited many years ago in so-called art-products and in general manufactures. I compare, for instance, the engravings that were popular, and the caricatures that were sold then, the designs for plate, chins, &c., with what these forms of art represent now, and the comparison makes it clear to me that it is an entire paradox to say that we have not been great gainers in all these particulars. Look at the wonderful works of the Mintons,—of Coalbrookdale; look at the very forms of popular humour as exemplified in the cartoons of *Punch*; look at even the smaller and less prominent forms of art, even down to scene-painting, for instance, and things which touch the popular taste, and I think it will be impossible not to see that the sense of colour—of harmony and richness of colour,—has very much increased amongst the people, and I believe also that the increase in excellence of design has been equally marked. It is in this belief that I assure you that this Society will do its best to continue worthy of your patronage. You have been told in the report that we now propose to expend the reserve fund which we have been putting by for so many years in adding to the art institutions of this great metropolis. This year will give to the public the Grosvenor Gallery, the great enteprise of Sir Coutts Lindsay, who has spent more than 100,000*l.* in providing an institution which will offer to many artists of great power whose names are almost unknown to the general public of this country advantageous opportunities of exhibition. We hope that next year we shall have the pleasure of opening to you an exhibition of our works in a handsome building worthy in its architectural features, by the genius of Mr. Edward Barry, of our popular institution, and one which will add at once to our street decoration and to the pleasure and interest of every subscriber to the Art Union. I will now call upon our excellent friend and enthusiastic vice-president, Mr. George Godwin.

Mr. Godwin said he had been requested to second the adoption of the report, which he did most heartily, although he could have wished that the task had fallen to the lot of one who had been less often before them. It was a most satisfactory report which had been presented, and the Council had no need whatever to speak apologetically in any way. The past year had been one of disaster; there had been extraordinary depression in every department of trade; and these things, together with the cruel suspense in which Europe had been held for so long, had materially interfered with subscriptions to societies, and even with the comforts of homes. When it was remembered that there were more than 15,000*l.* subscribed to the Art-Union of London notwithstanding all these adverse circumstances, the meeting would agree with him that it was a subject for great congratulation. Moreover, if the amount subscribed was not quite so large as it was last year, there was a compensating circumstance in the fact that although the print for the year was not so important or so striking as those of some previous years, and had consequently not brought in so many new subscribers, it had not cost so much to produce, so that there was more money to be distributed in the purchase of works of art from the various galleries of the metropolis and elsewhere,—and no doubt the Council would put on its list the Grosvenor Gallery, whence it would probably derive some of the best of the Art-Union prizes. It was an admirable notion of an able man to provide a series of fine apartments in which good pictures should be seen with as much ease and pleasure as if they were in the visitor's own room. In the Grosvenor Gallery each picture was to have a space of wall-surface surrounding it, and no picture was to be "skied"; consequently the works exhibited would be seen to the greatest possible advantage. Allusion had been made in the report to the Philadelphia Exhibition, but no notice appeared to have been taken of the Paris Exhibition, which he earnestly hoped that all Englishmen who had the means, whether as artists or manufacturers, would do their best to support. The Prince of Wales was manifesting very great interest in the Exhibition, not only as a whole, but at the present time in respect of the constructive works now going forward so rapidly. The Palace on the Trocadero had already taken a shape which would astonish those who saw it; and so, in the art department, the great picture-galleries would be a particularly noteworthy feature of the Exhibition, in aid of which the French Government had voted a million and a half sterling. There were many other points of the report on which he should have liked to speak; as, for instance, the question as to the alleged falling off in public taste in art, which was discussed at the Social Science Congress in Liverpool last year. It was downright nonsense, and nothing short of it, to say that taste for art products in England had lately deteriorated, notwithstanding the assertion of two such eminent men as Mr. Poynter and Mr. Mark Pattison. Such an assertion needed no answer to those who had looked into the matter. He (Mr. Godwin) maintained that we had now more painters capable of doing good works, more architects capable of erecting good buildings, and more composers capable of giving us good music, than was the case twenty years ago. We failed, it was true, by some means or other, in the *highest* art work; we had plenty of good art, but very little of the highest; and it was a matter of the greatest importance that we should investigate this fact and see what was the cause of it. He thought that the Government might very fairly be called upon to inquire into this point. Before, however, art would have fair play in England, there must be more mural decoration appealing to the public, more commissions must be given to artists by Government and public bodies. It was not sufficient (though very necessary) to teach 70,000 or 80,000 people to draw. Means should be found for the employment of those who were able, by the decoration of our vestry-halls, town-halls, Government buildings, and such like, with good pictorial art, which would have an effect in educating the public taste. In the meantime, we should not be too eager for rapid progress. A breast-plate such as that found by Dr. Schliemann, which took us back centuries before Phidias, served to show how slow had been the growth of great art. In conclusion, Mr. Godwin spoke in high terms of commendation of the labours of Mr. Watson and the other members of the staff, whose assiduity in the discharge of their duties was deserving of all praise.

The motion for the adoption of the report having been unanimously agreed to,

Mr. Bennoch moved a vote of thanks to the honorary secretaries, Mr. Lewis Pocock and Mr. Edmund Antrobus, whose labours in the management of the affairs of the society bore testimony to their interest in the work. Mr. Pocock had been for forty years honorary secretary, and Mr. Antrobus had been his colleague for a very large number of years; both gentlemen had done excellent service to the society. Mr. Bennoch cordially endorsed all that Mr. Godwin had said as to Mr. Watson and the office staff generally.

Sir Walter Stirling, in seconding the motion, said he regarded the present almost as an epoch in the year. At a time when the public journals were announcing the near proximity of a fearful war, of which probably many now living would not see the end, he was delighted to be able to do something in furtherance of the arts of peace by seconding the resolution. Though it might be true that,—

> "No one regards the man who lays the stones,
> But all consent to praise Inigo Jones,"

it was certainly not the desire of those who managed the affairs of the Art-Union of London to detract from the merit due to those who had been its instruments in carrying on its work so successfully. Sir Walter concluded by parodying Byron as follows:—

> "How arts improve at each successive stage,
> Which mark the growth and progress of the age;
> While arts and artists flourish in communion,
> Fann'd, fed, and foster'd by our own Art-Union!"

The motion having been carried, Mr. Antrobus briefly responded on behalf of himself and Mr. Pocock, and a vote of thanks to the Chairman, accorded by acclamation, was followed by the appointment of Miss Capel and Miss Edith Verity as Goddesses of Fortune, and the drawing for the prizes. The following is a list of the principal prizeholders:—

* The Kensington House Collection at Christie & Manson's.

An Oil Painting by Ed. Armitage, R.A., "Joseph and Mary," value 400l.—Garrod, C. W., Wells.

200*l.*—Lay, Jno., Colchester; Young, T., Port Augusta, S.A.

150*l.*—Hayes, T. H., 18, Geneva-road; Lillywhite, A. H., Richmond-hill; Rossiter, J., New Plymouth, N.Z.

100*l.*—Bentley, W., Cheapside; Hollis, T. T., Old Dover-road; Reed, Mrs. E., Boston, U.S.; Ross, W. H., Port Pirie, S.A.; White, J. L., Camberwell.

75*l.*—Charlton, T., Lordship-lane; Geer, C., Local Government Board; Gradwell, W., Barrow-in-Furness; Harris, Samuel, Isle of Man; Hooper, W. E. P., Kilburn; Maclean, R. M., Lombard-street.

60*l.*—Arnold, C., Canonbury-square; Driver, W. P., Ashby; Evans, J. K., Holywell; Ford, J. T., Stourbridge; Knight, J. W., Hyde Park-square; Payne, A., Tiverton; Wilcox, J. B., New North-road; Woodward, Mrs., Maida-hill.

50*l.*—Bremner, H., Liverpool; Cressman, Mrs., Camden-square; Darling, A. J., Warren-street; Edmonds, W., High Wycombe; Gardner, A. H., Folkestone; Hawes, W. E., Bedford-road; Masterman, J., Wakefield; McGillivray, A. J., Ottawa; Siddley, J., Oakfield; Warner, H. Farringdon, Alton.

45*l.*—Beal, H. R., Bedford-row; Bovill, Mrs. W., Redcliffe-gardens; Cutler, H. P., Manchester; Fergusson, J. H., Wood-street; Harper, —, 1, Gibbons-place, Plymouth; Huison, G., Adelaide; Lindsay, Mrs., Maiden-lane; May, Rev. J. H., Geelong; McKenzie, M., Railway Clearing-house; Smith, Griffith, Endsleigh-street; Taylor, C. C., Railway Clearing-house; Williams, Thomas, Merthyr.

40*l.*—Alleyne, R., Quebec; Birt, G., Port Elizabeth; Brown, E., Railway Clearing-house; Carr, J., Sheffield; Craven, J. K., Kansas City; Dangar, F. H., Sydney; Glenny, H., 152, Strand; Jameson, J. A., Hull; Jones, W., Wood-green; Kelsh, Rev. T., Hobart Town; King, C., Westbourne-grove; Rolfe, Mrs., Harlestone; Sewell, Jno., Aldersgate-street; Sparrow, A., Liverpool.

35*l.*—Barkley, W., Stirling; Campos, H. E., Oporto; Cohen, H. L., 2, Cleveland-terrace; Gate, A. J., Mecklenburgh-square; Harper, G., Lockwood; Harris, J., 58, Wilson-street, E.C.; Harrison, E. J., Birmingham; Hobart, F., Hingham, U.S.A.; Humphreys, Miss, Walcott; Jones, Jno. W., Palmerston-buildings; Jones, Miss A., Barthomley; Mirfield, H., Railway Clearing-house; Purdy, W., Stamford-hill; Smith, Jno., Swaffham; Stock, J., Invercargill; Warburton, W. J., Sheffield.

25*l.*—Bennett, C., Kennington; Blinkhorne, E., Birchin-lane; Bosisto, T. B., Strathalbyn; Brunskill, H., Railway Clearing House; Cavenagh, W., Greymouth; Drake, J. L., Walworth; Forster, H., 195, Malpas-road; Glover, W., Pontefract; Green, W. R., Ecclesfield; Henshaw, H., Biggleswade; Hill, W., Boulogne; Holmes, G. Shacklewell; Holtby, R., York; Leighton, J. W., San Francisco; Northcote, W. C., Ealing; Ray, W., Manchester; Trevor, H., 1st Life Guards; Webb, G., Crosby-square; Weston, Thos., Macclesfield; Wigget, A., Prince's-gardens.

20*l.*—A. L. X. X., Barcelona; A. L. Y. F., Barcelona; Burgess, R. M., North Shields; Chapman, S., Huddersfield; Churcher, W. E., Fareham; Davenport, E., St. Alban's; Davies, W., Portmadoc; Farquharson, J., Tonillae; Gemmell, A., Hobart Town; Graves, J. P., St. Dunstan's-hill; Gundry, J., 1, Soho-square; Henley, H. London-bridge; Jackman, J. R., Sandhurst, Victoria; Johnston, J., Kelso; Kingston, R., Woolsthorp; M'Cree, H. C., Halifax; Mitchell, T., Holbeach; Newcomb, R. J., Derby; Noyes, Jno., Chippenham; Patten, C., Hokitika; Phillips, J. R., Port Elizabeth; Pocock, Lewis, 70, Gower-street; Richardson, J., Liverpool; Rothwell, W., Somerville; Stephenson, G., Plymouth; Tedexo, R., Queenstown.

15*l.*—A. B. Perth, W.A.; Allen, W., Lillington-street; Boulsbee, Captain, Bedford; Brown, C., Settle; Buckhardt, N., San Francisco; Cane, C., Norwood, S.A.; Chilcott, J., Kingston-on-Thames; Chipman, L. de V., Kentville; G. O. F., Barcelona; Griffin, G., Manchester; Haslam, Rev. J., Willunga, S.A.; Johnson, Robert, Walthamstow; Little, H. B., Basinghall-court; McPherson, H., Merino; Mason, G., G.N.R., N.; Matthews, M., Bucklersbury; Matthews, E., Silchester-road; Munro, J., Mossel Bay; Munnings, G., 39, Albert-street; O'Hara, C., Berwick-street; Parkinson, J., Southsea; Ramage & Son, Jermyn-street; Rolfe, H. L., Nicholas-lane; Row, C., Swansea; Thomas, W., Hill River, S.A.; Walsh, Sam, Bradford; Webb, W., Hatfield; White, E. E., Reading; Wincey, W. F., Gawler, S.A.; Wise, Mrs. Jane, Woodcote.

10*l.*—Adams, E. L., Patricroft; Alcock, J. W., Sunderland; Backler, H. M., Lordship-lane; Baker, H. M., Dover; Brown, G., Newcastle-on-Tyne; Champion, T. A., Wollingford; Chovill, W. G., Piccadilly; Cox, H., Barnsbury; Dandison, W. J., Barnsley; Deane, J. A., Dewsbury; Denton, E. P., Adelaide; Denyer, E. C., Northumberland Park; D'Yssai, Louis, Jerez de la Frontera; Edghill, N. W., Demerara; Eyssen, A., Frankfort; Ford, H. T., London, Ontario; Holditch, T. P., Market Row; Kent, Jas., Sheffield; King, W. C., Lombard-street; Lawrence, V., Port Adelaide; Lennon, J., Quebec; Mackinnon, B. B. T., Hornsey-lane; Mann, C., Adelaide; Mathews, P., Leo; Matthews, Mrs., 39, Manchester-square; Mitchell, J., Cockermouth; Morter, J., Stratford; Newberry, —, Plymouth; Park, C., Long-acre; Parkinson, J., Southsea; Rooke, E. A., Old Burlington-street; Rumbal, J. J., Upper Clapton; Smith, H. W., Coleman-street; Stennings, C. H., Martham; Summers, T., Romsey; Trewek, J., Egremont; White, C., Lincoln; Williamson, Dr., Notting-hill; Wolfe, W., Greymouth; Wood, R. A., Gateshead.

A Plaque in Pottery, with an original Painting, by G. Levis.—Morris, M., Camberwell.

A bronze Statuette, "Cimabúé."—Bailey, W. W., Kilburn; Barnes, R., Milltown; Begent, C. E., Chalk Farm; Churches, S., Maillala; Creaser, W., Adelaide; De Hain, Jessie, Port St. Mary.

A copy in bronze of the Townley Vase.—Aberdeen, E., 11, Boscobel-gardens; Beavis, R., Fitzroy-square; Dunsdale, Hon. Baron, Hertford; Knox, H., Cheapside; Mead, J. O., Hartford, U.S.A.; Miron, R., Shepherd's-bush.

A China Tazza.—Arbuthnot, H. G., Princes-gate; Bailey, H., Stroud; Baker, F., South Kensington; Beardmore, J., Dudley; Dean, H., Gawler; Denny, J. T., Portland; Hannsom, L. M., Ottawa; Irving, D., Newark; Morris, E., Port Elizabeth; Reid, William, Taunton; Robinson, N., Manchester; Russell, W. J., Ladbroke-road; Rycraft, C. E., Oakfield; Sadler, —, Southport; Sherwood, N. V., 6, Leadenhall-street; Suter, W., Arundel; Thomas, Mrs. R., Unley, S.A.; Turner, G. B., 189, Victoria Park-road; Welch, A. G., Stoke Newington; Wells, C. S., Hull.

A Statuette, "Net-Mending."—Barber, W. R., Brixton; Cooper, J. G., Bideford; Cooper, Mrs., Cromwell gardens; Cooper, R., 32, Fleet-street; Gibbs, G., 19, Pembridge-square; Gossit, M., 4, Coleman-street; Mackrell, T. Reading; Mayer, Alex., Limerick; Ritchie, W., Dundee; Rollinson, J., Aberdeen, S.A.

ROYAL INSTITUTE OF BRITISH ARCHITECTS.

AT the ordinary general meeting of this Institute held on Monday evening last, Mr. Charles Barry, president, in the chair, the following gentlemen were balloted for and duly elected, viz.:—As Fellow, Mr. Matthew Wyatt, of Great Russell-street; and as Associate, Mr. William Trimmer, of Great Queen-street.

Dr. Henry Schliemann, the excavator and explorer of Troy and Mycenæ, was elected by acclamation an Honorary and Corresponding Member, and it was announced that an extraordinary general meeting will be held on Monday next, the 30th inst., at eight p.m., for the purpose of presenting the Doctor with his diploma of election, when it is fully expected that Mr. Gladstone will be present. A limited number of tickets will be available for ladies (morning dress).

The Chairman said he had to announce, with much regret, the death of Mr. Charles Langham, Fellow. A more pleasing announcement was that the fund which is being subscribed to by the London members for the improvement of the Institute's premises now amounted to rather more than half the sum required (1,000*l.*), viz., 515*l.* The fund was increasing day by day, and there was no doubt that the whole of the necessary sum would be made up before very long.

With respect to his father's (Sir Charles Barry's) drawings, referred to at the last meeting,* the President stated that he had communicated with his brother (Mr. John Wolfe Barry), who would have much pleasure in presenting to the Institute a small selection from his father's drawings and sketches; in fact, as many of them as he could make up his mind to part with.

Mr. C. F. Hayward said this matter reminded him of the fact that the Institute hardly possessed any sketches or drawings by the late Professor Cockerell. It was greatly to be desired that the Institute should possess some of those beautiful works. He noticed that Mr. F. P. Cockerell was absent, so that he could not appeal to him personally; but he felt sure that if the suggestion he offered could be properly put to Mr. Cockerell, it would be adequately responded to.

The President said Mr. Hayward's remarks illustrated the saying that "gratitude is a lively sense of favours to come." Gratitude for what had been announced had prompted him to ask for a similar favour from Mr. Cockerell, who would no doubt give the suggestion his best consideration.

The secretary (Mr. Eastlake) read an extract from the will of the late Dr. Barlow, of Newington, bequeathing to the Institute the whole of the drawings illustrating his papers on "Symbolism" (read before the Institute some years ago), together with any architectural books in his library which might be selected by the Institute. The drawings were exhibited on the walls.

The secretary also called attention to a communication from Mr. Thomas Goodman, architect, Southend, stating that he had prepared accurate drawings of the fourteenth-century monuments and effigies of the De la Beche family in Aldworth Church, near Reading. These drawings are being prepared by Mr. Goodman for photo-lithography, and will be published together with a descriptive memoir by the vicar of Aldworth (the Rev. F. Llewellyn Lloyd) so soon as the names of 100 subscribers, at one guinea each, shall have been obtained, the profits, if any, to be given to the Church Restoration Fund.

Mr. Thomas Morris then read a paper entitled "West End New Street Improvements promoted by the Metropolitan Board of Works, with Suggested Modifications and Extensions." Of this paper we give the substance on page 421, merely premising here that many of the suggestions offered by the author have been already anticipated in articles which have recently † appeared in our own columns.

A long discussion followed, in which Messrs. Vulliamy, White, Hansard, Whichcord, Hayward, Jennings, Hebb, and the Chairman took part. We shall give a report next week.

* See *Builder*, page 385, *ante*.

† *Builder*, p. 206, *ante*, and elsewhere.

THE PROFESSOR OF ARCHITECTURE AT THE ACADEMY ON THE QUESTION OF MATERIALS.

SIR,—In your report of Mr. E. M. Barry's interesting lecture, the subject of which was "Town Architecture and Modern Problems," the following words occur:—"Polished granite is free from this difficulty, and if its costliness could be got over, might serve us admirably in our smoky and dirty streets."

I was much pleased to read this favourable opinion of the use of granite. As a Provincial architect coming to London some years ago, I was particularly struck with the unsatisfactory condition of the stonework of the public buildings, and after considering the subject well, I came to the conclusion that the true remedy would be found in the substitution of granite for stone, a conclusion I have occasionally urged upon the profession and the public. A few words, then, if you will allow me, upon the question of relative cost, which alone Mr. Barry seems doubtful about. During the last twenty years steam and machinery have been gradually reducing the cost of granite and granite work in London. Aberdeen contractors are willing to deliver the different colours of granite at the London railway stations, or at the Pool in the river, at 2s. per foot super., of optional sizes ready squared for ashlar; and machinists charge 3s. per foot super. for polishing. Thus for 5s. per foot we have all the material required for an absolutely plain granite building, and yet not absolutely plain, because the different colours of granite judiciously used constructurally would produce—to a certain degree—an ornamental effect. Of course, in addition to the 5s. for material there would be the cost of cartage in London, hoisting, setting, strings, architraves, and cornice of simple forms, and London contractors' profit. But if I take the dimensions and cost of the New Post Office,—a handsome but not very elaborate stone building,—a little calculation enables me to estimate the cost of the masonry of the two principal elevations at 20s. per square foot. Thus I have 15s. per foot to cover the above items, which any surveyor or practical man well knows to be not only sufficient for the purpose, but ample, in addition, for purely ornamental work.

Then there is an important point that should not be overlooked in considering relative cost, and that is, that stone buildings require periodical restoration. Last year there was a forest of scaffolding at the Houses of Parliament for this purpose, the cost of which must have been great. Lambeth Palace, Henry VII.'s Chapel, and the Temple Church, and many other buildings, have been entirely renewed. Granite building would save all this.

But a most important point connected with cost would be to ally this everlasting material with appropriate style and design. It is unnecessary for me to urge that a due regard to the peculiar nature of material is the very basis of all architectural design worthy of the name. The later Gothic styles, in which pinnacles, crockets, and carvings are more or less necessary, would be unsuitable for a granite building, but there are Byzantine, Romanesque, and Transitional structures, quite as ornamental, in which these features do not occur, that might be taken as models, to some extent. The decorative details are largely affected by incised and inlaid work and the use of coloured materials, all which would be available and suitable for a modern building of polished granite. The incised work, if of delicate patterns, might be gilded. The inlaid work would, of course, be flush, and executed either in coloured granite and serpentine or in the best encaustic tiles. But with the different colours of polished granite used constructionally, little purely ornamental work would be necessary. However much or little there might be, it is clear that it would not only be imperishable, but would harbour neither soot nor dirt. As regards the strings, jambs, and cornices, the styles suggested require only such as are of the simplest forms,—a few splays being all that we find in some of the finest examples. Beauty of proportion and boldness of design are conspicuous characteristics of most of these buildings rather than elaboration of detail.

Machinery will, of course, enter largely into the execution of a granite building, but whatever

we may feel as artists, it is impossible, in our day, as practical men, to set our veto upon the use of mechanical power. No contractor for a building in soft oolite stone submits to be so trammelled, for at the Law Courts and elsewhere the piston is as audible as the click of the mason's chisel. Still in an important granite building there would be plenty of scope for art in the mosaic work of friezes and spandrels on a bold scale. In conclusion, then, I think that no practical man will say that a building of imperishable polished granite may not be one of the architectural events of the future. For my own part, I feel very certain that it would have a magnificent effect; that the improved construction would be acknowledged; and that if the mode of building became general, our streets, instead of having a lugubrious and dirty aspect, as at present, would look surprisingly bright and cheerful. H. T.

TEWKESBURY ABBEY.

SIR,—As the writer of the article on this church, which has appeared in your numbers of the 14th and 21st inst., referring to my paper read at the Congress of the British Archæological Association in 1875, says I have made some "rather rash statements," I must put myself right in respect of the two which alone he specifies, and also repudiate the charge of rashness, which would have been hardly pardonable in me in such a case. His happy appeal to architectural students to visit this magnificent but little known building will doubtless bear fruit, and therefore this matter becomes of more than private interest. The singular termination of the western turrets called for careful study, as I found no critical observations upon them. It is true that Sir Gilbert Scott, in his first report, made twelve years since, mentions "the Norman pinnacles or turrets" "which are of a very peculiar design," but this slight observation upon a part of the building which was far off from the portions then about to be dealt with must surely not be taken as pledging him to a final judgment as to the date of the upper portions to which my observations referred. Having taken the trouble to go up to the turrets and carefully examine them stone by stone in company with the person whom I should consider to be most competent to assist at such a practical examination, I have no hesitation in repeating that "they are evidently modern imitations of twelfth-century work." The writer, whose remarks are, as he says, "architectural rather than archæological," will admit that mine being archæological rather than anything else, this mode of study was more likely to lead to a sound opinion than his careful examination "from below." I do not say that they are copies of any particular twelfth-century examples, but an imitation of the style, which accounts for their being, as everybody admits, curious, and, as he says, unique. When Dingley sketched the church in 1680, the high-pitched western gable was still standing, and he certainly shows these turrets with Gothic terminations, similar to those of the central tower. I think it probable that when the gable was lowered the pinnacles were altered, and the whole work looks more like eighteenth-century Norman than aught else.

I am very glad to hear my judgment as to the respective dates of the choir and its chapels questioned, because it opens up new ground, is of great interest, and there is no other place where such a problem can be started that I know of. The writer has shown very cleverly by the engraving on page 393 (which shows the first bay of the south aisle from the transept), what was actually done. Let us look at the feasibility of the course which he, and I suppose other persons who have seen the church, think was adopted in building these parts of it. The old Norman chancel, with its aisle (and chapels, as we may presume), having been cleared away all except the six short piers of the arcade, it is thought that the architect, being about to build a most rich, handsome, and costly eastern termination, hesitated to pull these piers down, raised the halves of them which were next the choir two courses, on which he sprang these arches, and on them raised the choir. He, at the same time,—one cannot conceive why,—sprang the vaulting of the aisle from the old capitals, on the other sides of these piers, so that the aisle and its surrounding chapels are pitched lower than the openings of the choir arches, and the faces of the vaults are exposed (as seen on your engraving, page 375), where the centre arch exhibits the vault, looking as if it ought to rest against a dead wall. The writer's first suggested reason cannot be the true one, for space could have been got for the vault even, if necessary, by raising the large windows, or, at least, by tilting the ridge ribs of the cross vaults till they cleared the apex of each arch. His second suggestion is improbable, because, having demolished about 60 ft. run of the old Norman aisle wall, they could hardly stand at the length of 6 ft., which remained; they would, at the least, have raised the old wall and vaulting shaft so as to make their rare and magnificent work complete, instead of building an aisle and chapel, which, however beautiful in themselves, look, when taken in connexion with the choir, squat and unsatisfactory. My suggestion is simply that they built the aisle and chapels before deciding to rebuild the choir, sprang their vaults naturally from the existing capitals, and let the inner faces of them die against the dead wall above the old Norman arcade. Then their ideas grew,—a not uncommon thing,—and the choir was rebuilt, raising the inner halves of the piers, and working as far as possible in the loftier proportions of the period. When I first saw the church the scaffolding was up in the choir, so that I could get with some little difficulty at the work, and I felt sure that the present condition of the arch carrying the inner margin of the vault was not its original condition, also that the diaper work was a mere filling in to hide the ugly end of the cross-vault. I have not said this is "certainly" so, but it is a point which any future observer might follow out by studying the mouldings of the choir and the aisles respectively, particularly those on the two sides of the aisle vault. I am glad to find that the writer agrees with my suggestion as to the structural history of the chapels attached to the north transept. There is a further question,—was the eastern lady-chapel built at the same time as the other apsidal chapels? If so, it would probably correspond with them in design, and be not very much longer than they are. But the parts of it which remain (as seen from the private garden at the east end, which is unfortunately not the vicarage garden) indicate a building of the fifteenth century, very rich, very high, and which is said to have been at the dissolution 100 ft. in length.

I am sure that your architectural description of the Abbey will be most serviceable in drawing attention to it, and in helping, by some of its useful suggestions, the work that is now going on. THOMAS BLASHILL.

ST. GEORGE'S HALL, LIVERPOOL.

SIR,—I observe that in the *Builder* of the 7th inst. you refer to the intended "Walker Art Gallery, Liverpool," the whole of the sculpture on the exterior of which is to be in its place before the building is considered finished and handed over to the town. This is a wise determination on the part of the donor, and will form a singular contrast to the neglect with which another building, its immediate neighbour, has been treated.

St. George's Hall, which must always necessarily form the central and most important feature, in the group of buildings to which the Art Gallery forms the latest contribution, has now been opened upwards of twenty years; and it is still externally, essentially unfinished. According to the design of the architect, the late Mr. Elmes, sculpture, formed a most important feature, especially on the eastern façade, which is in fact its most striking and original side, and that which is first seen by all visitors to the town who arrive by the London and North-Western Railway Station in Lime-street. The pedestals between the square pillars which flank the principal colonnade of this façade on the north and south, and which were intended to be surmounted by twelve emblematical figures in sets of six each, standing out from the background formed by the recessed wall behind, are still untenanted. Rough-hewn blocks of stone underneath each pedestal in the screen-wall from which the square pillars spring intended for the carving of bas-reliefs, as well as similar smaller blocks of rough stone at the semicircular north end, also intended to be carved in relief, all remain untouched by the sculptor's chisel.

All these enrichments formed part and parcel of the original design, as I have mentioned, and were specially shown on a very beautifully-executed plaster-of-Paris model prepared under the eye of the architect about the time of the commencement of the hall. This statuary, in combination with the architecture, formed, in fact, the crowning characteristic of the design; and the knowledge of what this façade was really intended to be makes its present bald and forlorn aspect the more painful.

The attention of the local authorities has been called to this state of things from time to time for years past. Members of the architectural society of the town have endeavoured at their meetings to arouse the slumbering taste of the public, and the press have done their part, but apparently to no purpose.

There are in the town council, if I mistake not, gentlemen who talk most volubly upon the fine arts, and who proclaim themselves their warm advocates and patrons. Architects also, as well as merchants and tradesmen of wealth and influence, are to be found there. Can their united efforts do nothing towards removing this stigma which attaches to the taste of their town? Liverpool surely cannot plead poverty in such a cause!

This building is certainly one of the finest specimens of Grecian architecture in modern Europe, and may be claimed as a national monument. The whole country has an interest in it, and therefore residents and non-residents alike are concerned in its being done justice to by its immediate owners and custodians. F.

AN ARCHITECTURAL OPERETTA.

ARCHITECTURAL operetta has now to pass through the many stages, awaiting each fresh development of the arts before reaching the winter of its age. Perhaps it was its first appearance in England at which we assisted the other night at this session's *soirée* of the Architectural Association. Sentiments deemed oddly appropriate by a professional audience were then expressed, and some of them sung to well-known airs; the whole being put into a musical setting. "The Client" (performed by Mr. H. H. Stannus, the author of the sketch) determines to build a house with the finest modern improvements, considers carefully how he shall set about it, settles on a competition, and, like the judicious and original man he seems, settles at once the terms of his advertisement. He is thereafter visited by *Thirteenth Century* (Mr. A. C. Booth), dressed in the height of the fashion of his day, and bearing show-designs with him. This artist is full of confidence in himself, and yet benevolent enough to share confidences with the world. Mr. G. E. S. Langford personated the next arrival, *Sixteenth Century*, singing pretty songs, saying much the same sort of thing about studies, talents, and great things that can be promised. *Queen Anne* (Mr. E. G. Hayes, the honorary secretary of the Association) thereafter had her say anent "curlywiggy pediments in red brick" and other graces. The perplexities and resolutions of "The Client," and the final fate of everybody, need not be detailed; as a little knowledge and imagination may be used without danger. The record would, however, be very incomplete without mention of laughter, frequent applause, and encores. Author, actors, and audience were all supplied by the Association, and everybody is entitled to congratulations on the success of all the little novelties this year.

THE ARTISANS' DWELLINGS COMPANY AND THEIR TENANTS.

THE SHAFTESBURY PARK ESTATE.

AN indignation meeting of the tenants on the Shaftesbury Park Estate at Battersea, which was held last week, would seem to indicate that the purely philanthropic objects with which it has been alleged the Artisans', Labourers', and General Dwellings Company commenced their operations scarcely exist, and that the company is, after all, nothing less than an ordinary building association for the purposes of profit. It appears that the tenants on the estate have received notice from the Company that on and after the 7th of May their rents will be increased to the extent of from 12 to 13 per cent. The tenants complain that this proceeding is a breach of faith with them, inasmuch as the Company held out as an inducement to occupants that their leading objects were to assist the working classes to obtain improved dwellings, erected from the best designs, at the lowest possible cost, to help the tenants to become owners of the houses they occupy. The tenants further complain that the raising of their rents is an injustice, as they are placed in the exceptional

position of being prevented from sub-letting any portion of their tenements or of exercising certain trades in their dwellings, and they contend that this is an answer to the Company's argument that the rents for the same class of houses outside the boundary of the Estate are considerably higher than those on the Estate itself. The tenants also point to the fact that at the last annual meeting of the shareholders of the Company a dividend of 6 per cent. was declared, and that there is no necessity for the rents to be raised.

At a meeting of the tenantry above alluded to, there were about 500 persons present, and ultimately a resolution was passed that a public meeting be held to endeavour to obtain a reconsideration of the resolution of the directors, and that Lords Shaftesbury, Lichfield, and Elcho be invited to attend the meeting. A committee was likewise appointed to carry out the arrangements for the meeting.

HOW DID MEDIÆVAL ARCHITECTS WORK?

THE CHOIR, CANTERBURY.

At a meeting of the Sheffield Archæological Society on the 12th inst., Mr. Charles Hadfield read a paper on "The History and Re-building of the Choir of Canterbury Cathedral, A.D. 1175." The Rev. J. Stacye, M.A., occupied the chair.

Mr. C. Hadfield stated that he proposed to submit to their consideration a series of facts on the designing and erection of Canterbury Cathedral, which would prove to be at variance with a somewhat generally received, yet mistaken, view of the way in which Mediæval building operations were carried on. Mr. Street, the eminent architect, had, in his admirable work on Spanish architecture, given details of the Spanish Mediæval architects and their *modus operandi*, which fully bore out his (Mr. Hadfield's) view, proving that they were men of culture, honoured and sought after by princes and great ecclesiastics, and often summoned from distant countries, chiefly France and Germany, to design and superintend work. Mr. Street remarked,—"In short, the common belief in a race of clerical architects, and in ubiquitous bodies of Freemasons, seems to me to be altogether erroneous. The more careful the inquiry is that we make into the customs of the architects of the Middle Ages, the more clear does it appear that neither of these classes had any general existence; and in Spain, so far as I have examined, I have met with not a single trace of either." Having examined the writings of Wilars de Honecort (thirteenth century), and a work edited by Professor Willis on churches at Cambrai, Laon, Rheims, and other places, he pointed out that the recent researches of other well-known writers had brought to light the names and details of a number of Mediæval lay architects. We also knew, from contemporary and trustworthy evidence, that during the rebuilding of the choir of Canterbury Cathedral at the close of the twelfth century, lay architects were employed by the monks, and entrusted with the sole management of the designing and carrying out of the works. He would not, then, regret the trouble this paper might have cost him if he succeeded in so presenting the matter before them as to convey an enhanced appreciation of the efforts of those silent artist workers whose names and bodies alike had perished, but whose intellectual labours had been preserved to our own time by their works through long centuries. He then proceeded to discuss the manuscripts of Gervase, a monk of Canterbury, and an eye-witness of the martyrdom and interment of St. Thomas-à-Becket on December 29th, 1170, and of the destructive fire 1174, of which he had left what Professor Willis termed a valuable and minute account. These MSS. have been printed in complete form in the collection of chronicles known as the "Decem Scriptores," and quoted by most subsequent writers on the cathedral. In reviewing the history given by Gervase of the burning and repair of the Church of Christ at Canterbury, Mr. Hadfield said that, although the monks decided on something of the nature of a modern competition for the rebuilding of the edifice, they did not advertise far and wide for batches of smart water-colour or pen-and-ink drawings, which, in ninety-nine cases out of a hundred, are simply misleading and valueless, so far as they afford trustworthy evidence of the realisation of what is delineated, but sought counsel from a number of skilled men, heard what each one had to say, and then made their choice, having, doubtless, properly remunerated the unsuccessful competitors for their trouble. According to Gervase, "Convocati sunt artifices Franci et Angli,"—French and English artificers, as Willis translates it, though he (Mr. Hadfield) preferred the term "architects" or "engineers." He had in his mind a thirteenth-century hymn on the Incarnation, where the word "artifex" is employed in such phrase as to convey a correct interpretation:—

"Latet sol in sidere
Oriens in vespere
Artifex in opere."

"The sun is concealed within a star, the Orient within the evening star, the Creator within his handiwork." Whilst some suggested the repair of the columns, and undertook to carry out the work without the removal of the superstructure, others boldly declared that the monks must make up their minds to the removal of the whole, and its reconstruction. William of Sens, a man full of tact and ingenuity, and well skilled in wood and stone construction, was retained on account of his lively genius and good reputation, and all the others were dismissed. "And to him and the providence of God was the execution of the work committed." Lanfranc was the first abbot of St. Stephen's Monastery, at Caen, where he erected, in 1064, the great church of the Abbaye aux Hommes, dedicated in 1077, after his removal to Canterbury. The two churches were building at the same time, and were nearly alike in dimensions and design, and were possibly the work of one architect. The fire which had enabled William of Sens to propound a scheme of reconstruction began in the roof of the choir. That portion of the building fell in, igniting the wooden seats and furniture, and the intense heat from the conflagration calcined and split the columns of the arcade to such an extent as to necessitate the removal of the whole within the two outer walls. These, as is evident from the portions remaining, were protected from the direct action of the fire by the stone-vaulted ceiling of the aisles, and were thus comparatively uninjured. The idea of William of Sens was to reconstruct in a new and commanding style the pillars and arcades on the old foundations above the crypt, and to cover them with a groined stone vault in place of the wooden ceiling, thus reducing the risk of another disaster by fire, whilst he proposed to retain the old stone walls and raise them to fit the proportions of the new interior work. The masonry from that point upwards is finer in execution than below, and in some instances the wall pilasters have been renewed down to the door-level. After reviewing the interior work in its details, as far as William of Sens was concerned, Mr. Hadfield showed that the latter, who was injured by the fall of scaffolding, was succeeded by another architect,—William by name, English by nation, small indeed in body, but highly skilled and trustworthy in many kinds of work. He followed out the plans of his predecessor, and we detect but a slight change in the superstructure, and that apparent to an architect only, after close inspection, in a certain gracefulness and freedom of design in some of the details of the eastern portion of the church. It is in the grand crypt or undercroft of the Trinity Chapel that we notice a departure from the first design, and that we see the mind and hand of the new master, and being unfettered he adopted a bolder, more advanced, and thoroughly English style of pointed work. In the beginning of the sixth year from the fire, September, 1180, and at the resumption of the works, the monks were seized with a violent longing to prepare the choir so that they might enter in at the coming Easter, and the master set himself manfully to work accordingly. The convent, ejected from the old choir by the fire of 1174, re-entered the new one in 1180. Willis considers the necessary funds for carrying on this work, and its subsequent completion four years later, were largely supplied from offerings at the tomb of St. Thomas. Bringing down the history of the cathedral to the present century, Mr. Hadfield protested against the vandalism of the Dean and Chapter in 1832, when they disfigured the fabric by a spiritless and feeble copy of the south tower in place of the low tower of Lanfranc's church, which had been allowed to remain through so many centuries and changes, as shown in Britton's views of the cathedral. It was with pleasure that he turned from its poor and crude carvings and details to examine the new figures set up by the care of the late Dean Alfred, about seven years ago, in the niches of the south porch and tower. They were the work of the late Theodore Phyffers, a clever Belgian sculptor, who had resided in England for some years, and who, he regretted to say, had recently passed away from us almost unnoticed. These specimens of his skill represent the kings of England and the archbishops, from the time of St. Augustine, and are works of art.

VENTILATION OF CHURCHES.

The Scottish Church, conjointly with the Press of North Britain, are at present concerned in a subject that might with great advantage be taken up by all creeds,—the ventilation of sacred edifices.

One writer, in the *Glasgow News*, deserves to be handed down to posterity for his racy researches into the cause of somnolency during a sermon, and considers the gulf that separates purity of air and purity of doctrine is about as great as that which divided Lazarus from Dives. Few church-goers can be strangers to the disagreeable sensation which meets them on entering at the second service.

A choking feeling of stuffiness, a powerful odour of fusty clothes and moist flannel, and a prevailing element of scents, form the more marked features of the atmosphere. How many churches ever have a window open from one year's end to the other? There should be no surprise that our churches are unfilled in the afternoons. Of those who go few remain awake, and in the evening naps are frequently prevalent. Most of us have, at some time or other, been present at an open-air sermon. The language may be poor, the train of thought weak; but who on earth ever saw any of the audience asleep?

It is sometimes a cause of surprise that so many people prefer to sit under the gallery in church, even though the sittings there are no cheaper. But the reason is plain; many people know they cannot keep awake in church, and modestly think it much better to take sittings where their slumbers will be less obvious and audible. In other words, they want to do themselves good by stealth, and not to have to blush to find it fame. But in such conduct they are only taking a hair of the dog that bit them; for the bad air of the church is worse under the gallery. It is, or ought to be, a fact well known to insurance agents that the death rate is much higher amongst those who sit under the gallery than amongst those who sit in the body of the church.

Of course many of these church-going unfortunates strive against their somnolency. Pins, scent-bottles, pinches, toe-treading, and friendly nudges are resorted to; but all in vain.

By the time that "firstly" is reached by the minister, the plethoric auditor is far into the heart of the land where the patient patriarch dwelt. And when the pricking of a faithful conscience have impelled a church slumberer to change to a "rousing" preacher or a well-ventilated church to keep him awake, he finds the change too late. He has been to church to have a nap, and the habit cannot be removed.

Sometimes vested interests close church windows and doors. An influential doctor or undertaker, as churchwarden or deacon, can scarcely be expected to ventilate his church. Clergymen who bewail the emptiness of their churches at Sunday afternoon services should first try the physician Fresh Air. Let them make their sermons heavier if they will, but let the air their audience breathes be lighter. Let only asthmatic beadles be appointed. Let them lose one-half of their salary, to be added to the fund for cleaning the church, if a single window or door remains unopened during a specified time before afternoon or evening services, and the other half if the doors and windows are not then duly shut, to let the church be warmed. Let the managers of the church be carefully weeded of doctors, chemists, and undertakers. Let the architect of the church be bound to sit one afternoon out of every four in the sight of the congregation, and fined 10*l.* if he betray the slightest symptoms of falling asleep. By such measures as these, and only by such, can we ever hope to have ventilation and health reasonably well attended to.

And what is true of churches is true, more or less, of many other buildings. It is not luncheon alone that makes judges and jurymen so sleepy as the afternoon steals on. Bad air, too, could explain many a fit of illness and ill-temper on returning from church. The biographies of clergymen record frequent cases of exhaustion

from Sunday labour, not so hard in itself, but terrible in consequences, on account of the bad air amidst which the exertions are made. Who ever saw a churchwarden awake, or even the choir, during a Sunday afternoon sermon? We implore, therefore, all managers of churches to give more heed both before and during the service to the ventilation of the churches under their care.

LEOMINSTER PRIORY CHURCH.

SIR,—As Sir Gilbert Scott has drawn attention to the church at Leominster, perhaps your readers would read with some interest a few particulars of this building, as it certainly is, in its way, unique.

The original plan was very peculiar indeed. It had a nave with aisles, chancel with apsidal termination, west tower and central tower, without transepts; the whole, as far as I can ascertain, of late Norman. The exact date, however, is not by any means easy to discover, as although the general tooling, finish, and treatment of the work seem to indicate a late period of the style, yet the excessive plainness of the design certainly seems to carry the date up considerably. The general treatment is very bold and effective, for the greatest peculiarity is the very great height, this allowing—notwithstanding the height of the cardinals and presence of the flattened roof—of an ample clearstory. In the centre of the nave an interruption occurs by the substitution for the ordinary arch of one of equal height, but very contracted span,—in fact, a mere opening. The use of this seems to have been the attainment of greater longitudinal rigidity in view of the thrust of two towers.

This constituted the priory church. Seemingly about the middle, or perhaps later in the fourteenth century, a parochial portion was added, consisting of a second nave, adjoining the existing Norman one, and south aisle, the original Norman south aisle being of course destroyed to make way for the new nave, or rather to leave its floor free. The cardinals were of course all filled up, and the clearstory windows also, which now, owing to the sufficient height of the additions, were thrown inside. The west tower at the same period received a superposition of considerable height.

In the fifteenth century a new large west window was inserted into the later nave; and still more recently the colonnade separating the two later portions was, for some unaccountable reason, rebuilt in a very thin and impure Tuscan; the east window of the newer nave seems also somewhat of this date. Before this time, however, the eastern portion had either been destroyed or allowed to fall to ruins, and a new east wall was run across,—out of the square by the way,—just about where the first arch of the tower formerly stood, the new east wall being pierced with a window of small and incongruous, but not absolutely bad, design.

The later portion was used parochially up to a comparatively recent date, when the restoration of the Norman nave and remaining aisle was satisfactorily accomplished, and the services were of course thenceforward held in that portion. The organ was shortly afterwards removed by myself to the east portion of the little Norman aisle, which just allowed it to be squeezed in between the wall and architrave. The fittings of the later portion, all of quite inadmissible character in a Gothic edifice, were at the same time sold to assist in paying for the restorations.

It will be easily imagined that, what with one thing and another, the south or later portion has got into a very bad state; but it is quite a mistake to refer this in any way to the apathy of the local authorities. Churchwardens have, we know, a good deal to answer for (although their whitewash preserved perhaps as much as it defaced), but they are guiltless in this instance. Leominster Priory Church has been most lovingly, most comprehensively, and most minutely treated, in a work published by a late vicar of the parish,—the name escapes me at this moment, but he was, I believe, the immediate predecessor of the present incumbent, Mr. Edouart. And, with respect to the lay authorities, the parish enjoyed for many years the services of,—I will not say an intelligent, for the word would be here an impertinence; but I will say,—an intellectual conservative churchwarden and a true lover of art.

The fact is, the bad condition of this portion of the building is the consequence of the absolutely vile,—I can find no other fitting word,—quality of the stone used. What could be done has been, and the south-west window (all the Decorated examples are struck from the same centres) carefully restored with good Caen stone, so as to preserve it to the minutest detail.

I am quite unaware what the parishioners intend doing, as my communication with the town has been closed many years; but will you allow me, through your columns, to offer a suggestion or two?

There seem three courses open:—

1. To restore the whole of the later portion.

2. To rebuild the south aisle exactly corresponding to that on the north, except that to retain a specimen of each of the windows, and at the same time not too much curtail the dignity of the west front to give the western termination of the new aisle the same height and width as the present later nave, thus retaining its large Perpendicular window; a new window, copied from the present Decorated ones,—a reproduction, in fact,—to occupy the southern face of this semi-transept or narthex; a pierced parapet, copied from the present one, surmounting the whole; the present pinnacles at the two exterior corners, and the sedilia or piscina (I am not sure which they are) put as an insertion in the new south aisle wall. Thus every fragment of the later portion worth preserving, would be incorporated; and, if funds still increased, the east portion might be rebuilt on the old foundations which yet remain.

3. To erect the new outer wall on the line of the present columns, rebuilding the Decorated windows, to occupy the usual spaces between.

The first method will, I sincerely hope, not be attempted; the expense would be enormous, and the space, when obtained, comparatively valueless, for it certainly would never be filled; the proportions of the church would remain at their present anomalous figures (the width being within 1 ft. as great as the length). The columns must come down, for they could not possibly be allowed to form part of the new design; and, in fine, the whole later portion would require rebuilding.

The third method is certainly better. The new wall could be run up between the columns, the architrave carefully incorporated, and the piers themselves then extracted, a great deal in the way of material being furnished from the aisle.

The second method is, however, doubtless, the best, besides being probably the least expensive. The Norman nave not being vaulted, there is not the least risk,—in fact, the church would be stronger, for the lateral over-push of the new nave certainly does no good, whereas the tower has lost, by the sacrifice of the low aisle its south buttressing, the same being now supplied by a brick prop of unapproachable hideousness. The new aisle might be erected and roofed complete as far as the narthex, the materials of the condemned aisle being employed. Then the condemned nave could be gradually removed, commencing from the east end, and the narthex (which would have a projection from the aisle of about, say, 12 ft. or more) constructed with the materials. The beautiful fourteenth-century design, of course, appears over a doorway or porch in the southern face. With the exception of the portions enumerated, there is not, as I said, a fragment of the later work worth reproducing as an integral portion of the design, and this third method, at a comparatively low cost, would retain all. The Perpendicular window could, of course, remain, properly restored. Any materials remaining could either be sold or stored for future completion of the east end. The increase of accommodation would be considerable, and the internal arrangement would require no alteration whatever.

JOHN W. WARMAN, A.C.O.

WISBECH: THE DOCK QUESTION.

A SPECIAL meeting of the Town Council was held on the 20th inst. The Dock Committee's report recommended, in order to remove the groundless fears of the opponents of the Bill, that a committee should seek an interview with the Duke of Bedford and other persons and bodies interested in the Nene between Peterborough and the sea, and ascertain their views upon the subject. The Port and Harbour Committee recommended the appointment of the Dock Committee with full powers to arrange with any opposing interest, and to prepare a Bill to submit to the Council. The Mayor moved, Alderman Hampson seconded, and it was unanimously resolved, that renewed efforts be made to secure dock accommodation at Wisbech by promoting another Bill in Parliament next session, and in the meantime to consult the opposing interests, with a view to their concurrence in such a measure. The report of Mr. Abernethy, C.E., to the Town Council, upon the formation of a dock, is to be printed and circulated among supporters and opponents of the Bill with the view of drawing their attention to the importance of executing works, which are absolutely necessary not only for providing floating water for Wisbech, but for maintaining the safety of a vast quantity of land drained by the Nene.

CONGRESS OF FRENCH ARCHITECTS.

THE Société Centrale des Architectes has issued its annual invitation for a congress of French architects, to be held during the week from the 11th to the 16th of June next, and has published its programme of proceedings. The subjects to be discussed are architectural societies; the organisation of the *personnel* in building operations; the law of condemnation of land and buildings for public uses; terra cotta as a building material; architects' commissions; commemorative monuments still existing in France; and the architectural exhibition at the *Salon* of this summer, which will be open at the time of the congress. The proceedings will occupy the whole week, and will include visits to the buildings and grounds for the coming Exhibition, to the old Hôtels du Marais, near the Bastille, and to the Hôtel and Musée des Archives. One day is set apart for a trip to Amiens, and the examination of its cathedral and other antiquities. M. Eugène Millet will deliver a discourse on the late Henri Labrouste, and M. Desjardins a lecture on Egyptian art with reference to the late discoveries of M. Mariette. The society offers prizes to the Ecole des Beaux-Arts, the National Drawing School, and the Masons' and Stonecutters' Union. The session will close with a dinner and a musical entertainment.

M. Charles Lucas, one of the office-bearers, writes us to the effect that, notwithstanding the title of the congress, foreign *confrères* will be warmly welcomed.

A SOCIAL EXPERIMENT.

Sir CHARLES TREVELYAN has forwarded to the Charity Organisation Society an account of a successful "British Workman's House," which has been established at Warrington. In doing so he writes:—

"It is so unlikely that our working class will give up the physical and social comforts of the ordinary public-house until a substitute has been provided for it, and so certain that nothing of this sort will endure and spread which is not founded on a solid commercial basis, that, with your permission, I will make known any information which reaches me tending to this important result. The Warrington house has been a success, and although I would by no means advise a servile imitation of any single model, it is instructive to see how this success has been obtained. The following extract from a recent letter contains the explanation:—

'Warrington, March 12, 1877.

We have several reasons to give for our success as a company. We do everything on a commercial system. Our capital consists of 530*l.* in 1*l.* shares, paid up. Our house is very centrally situated. We issue monthly tickets to members at 6*d.* each; annual, 4*s.* each. We charge every one else who passes beyond the refreshment-bar 1*d.* This brings us about 50*l.* or 60*l.* per annum. Our billiard-table brings us from 80*l.* to 100*l.*; our beds, 130*l.* to 140*l.* Altogether, we have an income of about 280*l.* This enables us to pay a rent of 105*l.*, and taxes, &c., in proportion; and, after paying all our other expenses, we paid last year 10 per cent. to our shareholders, a debt of 7*l.* to our capital account, put by 18*l.* to the reserve, and brought forward a small balance. At the end of this year our rent will be increased to 140*l.*, so that we shall have to stir about a bit to make this up. We have a very nice reading-room, and we shall have a club-room very shortly. Our refreshment-bar belongs to our manager, who, in return for the profits thereon, and house-room, coals, gas, &c., gives his services and those of his wife, and keeps our place in good order, and clean.'"

FIRE-TRAPS.

SIR,—The recent calamitous fire at the St. Louis Hotel suggests to me to ask you, with regard to the common practice of constructing the interior walls and partitions in houses of wood,—forming substantially a wooden flue for the flames to rise up and quickly set fire to floor after floor,—whether it would not be well to make it compulsory that all such partitions should be of brickwork or concrete? While not adding much to the expense, this would greatly check the rapid run of the fire, and give people, especially in the bedrooms, more time to escape.

A READER.

ARCHÆOLOGICAL SOCIETIES.

Société Française d'Archéologie.—Congrès de Senlis.—This year the Société Française d'Archéologie holds its annual meeting at Senlis, Oise. The town in itself is interesting and but little known, being out of the grand thoroughfares, and presenting no inducement to the world of commonplace sightseers to turn out of their direct line from Boulogne to Paris at Orcil, where a branch line leads to Senlis. The Roman and Mediæval remains of the place itself are dwarfed by the extraordinary interest in places adjacent, which will be visited, such as Beauvais, Compeigne, Champlieu, Pierrefonds, &c.; and a little further are Soissons and Laon. In the last volume (vi.) of Mr. Roach Smith's "Collectanea Antiqua," the district from Compeigne and Champlieu to Laon, by Pierrefonds and the Roman towns excavated at Mont Berney, is described. The director of the congress is M. Léon Palustra, editor of the "Bulletin Monumental," which, together with the Société Française, was established by the late M. de Caumont.

London and Middlesex Archæological Society.—At the last meeting of this Society, an interesting paper was read by Mr. T. Milbourn, on "The Two First Churches of St. Stephen's, Walbrook." Mr. M. Bloxam, F.S.A., presided. The paper gave a concise history of the two churches, the first of which was built on the west side of Walbrook, and the second on the east. The archives of the churches, which had been thoroughly searched, revealed some curious facts as to the prices paid for various services and work performed. At one period there was a doubt as to who had a right to maintain the church, and in the twenty-eighth year of the reign of Edward I. (1300), an inquisition was held to determine who should do so, and the parish was called on to pay for repairs. Many of those highest in the church had paid for washing the vestments and other things out of their own pockets, and these sums were duly recorded. The original building was a Gothic structure of the Perpendicular period, and it had a tower, steeple, and belfry. The changes caused by the Reformation were duly marked by many evidences.

A NATIONAL ASSOCIATION FOR THE PROMOTION OF GOOD WORKMANSHIP.

SIR,—There being no great appreciation of, and very little encouragement for, high-class workmanship by the wealthy classes of this country, I would propose to supply an artificial stimulus to the production of fine work by the formation of an association under the above title. This association should annually offer important prizes to those workmen who should exhibit the best specimens of their special handicrafts. The prizes would be awarded to the actual producers of the selected works,—to artisans, not to tradesmen.

It cannot be supposed that the present application of wealth to the purchase of old pictures, of old china, and of all the rococo of past centuries, will, in any sensible degree, tend to promote national excellence, either in art or in workmanship. Fine art and fine workmanship were created in Greece and Italy by the wealth of those countries being, amongst other things, devoted to the public and private employment of the artist and the skilled artisan. This is the one only way to promote excellence in the arts and in manufactures. It is useless for men to graduate for either the highest class of art or of handicraft, if there be no demand for it.

This association is proposed as a compromise, and as an intervening step between the present and that future when the duties of the State towards the arts and manufactures shall be better understood. W. C. T.

CITY CHURCHES.

THE architect of St. Mary Aldermary, in Watling-street, having *carefully restored* the north aisle, has just discovered that the window-openings do not range with the sham outer openings. It is to be hoped that he will ultimately discover that the east end is not at right angles with the nave of the church. LOOKER ON.

The Unemployed in the United States.—It is estimated that in the United States generally two million of men are out of work, and of these, forty thousand are in New York.

THIS EASTERN QUESTION AN ENGINEERING ONE.

SIR,—People may call the strife between Russia and Turkey religious or political, but its physical basis is a geographical question.

Speaking summarily, it arises from the right of controlling navigation betwixt the Mediterranean and the Black Sea; at present this right is held by Turkey, it is claimed by Russia, and desired by every maritime power in the world, and it turns upon the possession of those two narrow water outlets called the Dardanelles or Hellespont and the Bosphorus or Straits of Constantinople.

It would appear that in prehistoric times this right was held by Troy at the European end of the channel, and when the Hellenes had captured Troy they were enabled to transfer the control to Byzantium at its Asiatic outlet, since called Constantinople or Stambul.

The physical conformation of this entire channel is peculiar, for the two narrow outlets are enlarged in the centre to some sixty miles or so, called the Propontis, the sea of Marmora or White Sea. It is very obvious that if we can turn or enlarge the two outlets we shall have a perpetual access from sea to sea, beneficial to commerce and productive of peace and goodwill among nations.

The western channel is narrowed by a promontory called the Peninsula of Gallipoli: the land should be channelled and blown up at the neck of this peninsula to admit water from the Gulf of Saros direct to the Marmora. Engineering difficulties, so-called, are good for trade, and they cost a mere tithe of waste caused by the dreadful wars that the right of possession to this channel has led to.

The eastern outlet involves a more complicated process: here we must start from the Gulf of Ismid and turn Scutari; if it be possible, the navigable outlet to the Sea of Marmora on the east should be from the mouth of the river Sakaria.

I do not propose to meddle with the existing outlets, for this fresh opening will tend to obviate any difficulties arising from the respective water levels of the two seas, thus to be more fully connected. A. H.

CENTRAL LONDON HOUSE BUILDING.

SIR,—Referring to your excellent article on the above subject, induces attention to another great want in the commercial part of western London, i.e., a good wide thoroughfare at right angles, say, to Oxford-street, with building running through to secondary parallel streets on either side, so as to provide show-rooms and agencies for some of the great country houses in the front, with cranes and facilities for loading and unloading, packing, warehousing, &c., in the rear. Few such premises are now to be had, yet London is essentially the commercial centre to which both buyers and producers gravitate, and the tendency is for all large manufacturers to have a representative establishment in the metropolis. To have to carry on the operations of loading and unloading from the front, thus impeding the traffic and interfering with their own and other people's business, is a drawback and nuisance with which we are all too familiar. Such an arrangement as above referred to would commend itself to commercial enterprise, and prove a good investment, either taken up as a metropolitan street improvement or as an estate improvement, by some of the large landed proprietors. T. C. S.

ANOTHER USE FOR "REFLECTORS."

SIR,—A curious accident occurred last week in Shoe-lane. A little boy, four years old, was playing on a sofa, close to a window, the blind being drawn down. The infant did not know the window was open. He rolled against the window and tumbled through a skylight underneath, about 20ft.; smashed the glass, and certainly would have been killed had he not fallen on a reflector which happened to be fixed in the bar-room of the Ben Jonson public house. The shock was deadened, and the child afterwards dropped on the floor, with only a cut about the forehead, but well enough to be running about half an hour after.

This reminds me of two similar accidents with a like fortunate result within the last two years. In Lawrence-lane, at the back of a house, a lad, whilst cleaning a window, lost his balance, and fell from the second story; happily, he dropped on a reflector fixed at the first-story window below, and was saved from certain death. The surface of the reflector was smashed, but the lad safe. The same thing happened to a porter in Bow-lane, whose leg would undoubtedly have been broken had not the reflector fixed below deadened the fall. P.

KNIGHTSBRIDGE BARRACKS.

SIR,—As it has been decided that a new building is to erected upon the old site, the works are now being carried on vigorously; the construction to be of red brick, with stone dressings; and it may be anticipated that an elevation not unworthy this beautiful position may supplement the old decrepit structure. The available site being 195 ft. in width (and that for only about two-thirds of its extent) is in length eight times its main width; for it is reduced to 90 ft. in width at the western extremity. So that for a central parade or drill-ground the space is too restricted; but by the new plan, doubtless, a greater length of inclosed quadrangle will be provided, by placing the riding-house and officers' quarters further westward. There is, however, one point of great public importance that should now be taken into consideration. On the eastern end of the plot there is a narrow public thoroughfare, leading from Tattersall's corner across the Kensington-road into the park; it is only 200 ft. in length, by a width varying from 9 ft. to 20 ft. On one side the Duke of Wellington's stables, presenting a tolerably fair elevation, borders the way. On the other there are three public-houses and four small lodging-houses, which occupy a margin of about 50 ft. in width, close up to the old barrack foundation. In fact, the back windows of this shabby range are within speaking distance of the west end of those of the barracks, which they darken and dominate.

On all other sides the position is open,—south to Kensington-road, north to the park, and west to the shrubbed border. Ought this squalid range to be suffered to remain on the east end,—above all, the three public-houses? Already there are five within 150 yards range of the barracks, three being directly opposite! Seeing that an appropriate canteen will be provided within the precincts, and that those rude and irregular structures will conceal the new barracks on the eastern approach from town, surely the whole range should be removed. Such a clearance would not only bestow an integrity of plan upon the new structure, but would also confer an inestimable advantage upon a great portion of the south-western district by enlarging and opening out (with border plantation next the barracks) a respectable open frontage thoroughfare to the Serpentine, and across the park, at either end of it. T. H. H.

BUILDERS' TENDERS.

LEWIS *v.* BRASS.

THIS was an action in the Common Pleas, before Mr. Justice Hawkins and a common jury, brought by Mr. Lewis, a draper in Oxford-street, against Mr. Brass, of Old-street, St. Luke's, for damages for breach of an alleged contract to rebuild the plaintiff's premises in Holles-street and Oxford-street. The quantities were supplied to the defendant and other builders, and contained a preliminary statement that part of the work which most affected the plaintiff's business, but which was not indicated on the plans or referred to in the quantities, would have to be completed by the —— day of ——, and that the general conditions would be very stringent on this and other points. There was also a note at the foot of the summary of the bills of quantities, stating that the general conditions could be seen at the office of the architect, Mr. Hughes.

The amount of the penalty and the time for the completion of the portion most affecting the plaintiff's business, and of the whole work, was left in blank in the conditions.

The defendant tendered for the work on a form supplied by the architect, whereby he agreed to execute the work shown on the plans and specifications for 4,193*l.* in twenty-six weeks, or 4,800*l.* in eighteen weeks. This tender was compiled in the absence of the defendant, and signed and sent in by a clerk, and was accepted by the architect, who stated in his letter that the contract would be prepared by the plaintiff's solicitor, and sent for signature. The defendant, however, ascertained that an error of 200*l.* had been made in the estimate, and withdrew his tender, and declined to carry out the work at that price; the plaintiff then negotiated with the builder who had sent in the next lowest tender, which was for 5,190*l.*, to execute the works in twenty weeks, and ultimately entered into a stringent contract with him for the execution of the work. Before that contract was signed the defendant offered to divide the 200*l.* with the plaintiff, and do the work for an increase of 130*l.* above his estimate.

It was contended by the plaintiff that the tender and acceptance formed a contract, but this was denied by the defendant, who contended that neither party intended to be or was in fact to be bound until the formal contract referred to in the quantities, and the letter accepting the offer was agreed and signed, and the details which had been left in blank in the form of conditions had been arranged between the parties.

The Judge held upon the point of law that there was a contract to erect a house according to the plans and specifications for a certain sum of money, but that neither party could have required the other to execute a contract embodying any unusual provisions in the building contract as to payment, penalty, or otherwise.

The Jury found that it was the intention of the parties that the tender and acceptance should be an agreement for some purpose, and also that the defendant was bound by his clerk's signature. The work executed was in reality different from that which was shown upon the plans and included in the specification, and which formed the subject of what was held to be the contract, and the jury ultimately assessed the damages at 200*l.*

Judgment was reserved by the Judge to enable him to consider as to whether he should hear further argument upon the point of law as to the existence of a contract.

Competition.—The designs of Mr. Stuart Colman, of Bristol, have been adopted by the committee of the Rev. David Thomas Memorial Church and Schools, to be erected at Bishopstow, at a cost of 6,000*l.*

MINOR COMMISSIONS.

SIR,—I have just parted from a foreman of works who came to pay for laths: as our conversation may be instructive, I venture to trouble you with it:—

"Now where's the plasterer's money?"

"I don't understand you."

"Why, we always get 2s. a load allowed in London."

"Indeed! What else do you get allowed?"

"Why, 8d. for 2 yds. of lime if paid at the time, 4d. if it is booked, 2d. for 1 yd., and 1d. for a ½."

"Then what return do you make for this allowance? You pass short weight, of course?"

"No, they don't get that out of me!"

"But now you are superintending work for your brother; how if you were not?"

"Oh, that would be another matter altogether!"

Comment on this is needless.

COUNTRY BUILDING MATERIAL MERCHANT.

DILAPIDATIONS: LESSEE AND LESSOR.

WILBERFORCE *v.* BLACHFORD.

IN this case (heard in the Southampton County Court) the Rev. Basil Wilberforce claimed 15*l.* for dilapidations in a house formerly occupied by the defendant under a repairing lease, he being the third occupier under the lease. Mr. Leigh appeared for the plaintiff, and Mr. Killby for the defendant.

Some discussion occurred as to the payment of costs, and Mr. Killby contended that too many particulars had been supplied, viz., to the amount of 31*l.* odd.

The Judge ruled that they could prove for the whole amount, but claimed only 15*l.*

Mr. Mitchell, architect and surveyor, was called, and proved the various dilapidations, which he estimated at over 31*l.*, and in cross-examination stated that these had been caused, doubtless, from time to time.

Mr. Killby contended that the action should have been brought against the lessor, not the assignee.

The Judge looked over a case, "Mule *v.* Garrett and Others," tried in 1870, in which the original lessee, having been sued by the lessor, in his turn sued the assignee, the latter being only liable for such damage as was done during his occupation.

In answer to his Honour, Mr. Mitchell said it was an old house.

Mr. Leigh said the lease of 1846 was a renewal of a lease dated 1822, but the covenant was that the tenant must repair and keep in repair.

The Judge said he should at the very first strike out 15*l.* from the surveyor's estimate. He considered 7*l.* 10*s.* was sufficient.

Mr. Leigh said that the Rev. Basil Wilberforce was bound to bring this action in justice to himself and his successors.

The Judge said he could not see this, the rev. gentleman was not bound. What had posterity done for him?

Judgment for 7*l.* 10*s.*, with costs.

CHURCH-BUILDING NEWS.

Southsea.—St. Jude's Mission Chapel, Southsea, has recently been consecrated by the Bishop of Winchester. The building, which is situated in Marmion-road, is intended principally to accommodate the poorer portion of the residents in St. Jude's district. The whole expense of the erection, including the site, has been borne by Captain Alexander Gordon, R.N. The building has been designed and carried out by Mr. Henry Lawrence, of Southsea, and will accommodate a congregation of 300 persons. It is 30 ft. wide, with a total length of 67 ft. inside, and 32 ft. high to the ridge of the open roof, with organ-chamber and vestry in the south-east angle. The style of the building is described as English-Gothic of the latter part of the thirteenth century. The exterior is built with split flints, and the windows, quoins, and dressing of Bath stone. Messrs. Maw & Co., of Broseley, supplied the encaustic tiles, and Messrs. Hart, Son, Peard, & Co., the gasfittings.

Wolverhampton.—Some time ago Miss Stokes made an offer of funds towards carrying out the original design of adding a spire to the church of St. Jude, Tettenhall-road. A meeting has been held, and a design, prepared by Messrs. Bidlake & Fleeming, architects, of Wolverhampton, has been approved of.

Bolsover.—For some years past it has been in contemplation to enlarge and repair the fine old church of St. Mary, Bolsover. The work has now commenced. The Duke of Rutland, whose ancestors repose within its walls and are commemorated on the costly monuments of its mortuary chapel, has undertaken to restore the chapel and the chancel, and subscribes largely to the rest of the fabric. The restoration is being executed under the superintendence of Mr. Mitchell-Withers, of Sheffield, who is also designing a new church for Whaley Thorne.

Midhurst.—St. Mary's Church, Easebourne (Midhurst), was reopened by the Lord Bishop of Chichester, on the 20th ult. The church is an Early English structure, dating back as far as 1290. Its register commences in the year 1638. It is situated on a spot adjoining the ancient Benedictine Priory of Easebourne, founded by Sir John de Rohun in the reign of Henry III. The restoration has been effected under the superintendence of Mr. Arthur Blomfield, and has been carried out by Messrs. Dove, Brothers. The church will comfortably accommodate 400 persons. The cost has been borne by the Earl of Egmont. Stained-glass windows have been added by Messrs. Heaton, Butler, & Bayne, and the peal of four bells has been recast in five bells by Messrs. Mears & Co.

Upper Slaughter.—On the 19th ult., the Church of St. Peter, Upper Slaughter, was formally re-opened, after restoration under the superintendence of Mr. J. E. K. Cutts, architect. Upwards of 1,300*l.* has been spent in the work.

Warminster (Wilts).—The Church of St. Aldhelm, Bishopstown, was re-opened, after restoration, on Easter Tuesday. The works consist of an entirely new chancel, except foundations; the restoration of the nave consists in the repair of the nave roof, the substitution of pointed windows for the previously unsightly circular-headed ones of recent date, all windows being treated in the fourteenth-century style, and fitted with tracery; a new oak pulpit and reredos; oak and pine seating throughout in chancel and nave; a new vestry and organ-chamber, chancel arch, and a renovation of the western entrance. Mr. W. Scott Champion was the architect, and Messrs. Wall & Hooke, of Brimscombe, were the builders.

York.—The new church of St. Maurice, York, is progressing towards completion. The gable above the chancel-arch has been built, the east and west walls have been completed, and the tracery windows inserted. The walls of the tower have been carried up to the height of 66 ft. from the ground, leaving a height of 14 ft. to be built to the top of the parapet, or a height of 25 ft. to the summit of the pinnacles. The woodwork to the whole of the roof is now completed, and the roofs of nave and aisles are slated in. Mr. Fisher is the architect.

DISSENTING CHURCH BUILDING NEWS.

Loftus-in-Cleveland.—A new Wesleyan chapel at Loftus, in the Cleveland district, was opened on the 20th ult., as a memorial to the Rev. Dr. Newton. The building occupies a prominent position at the east end of the village, and has accommodation for 900 persons. The cost has been about 3,000*l.*

Carbrook.—On the 8th ult., a building which is to be used as a Wesleyan Chapel and Sunday School, situated in Carbrook-street, was formally opened. The late Mr. Joseph Angus gave the site both for schools and chapel. The chapel is substantial and commodious, and well lighted. The total cost of the building, including the furniture, has been 1,700*l.*

Hucknall Torkard.—On the 3rd inst. a new Baptist Chapel was opened at Hucknall Torkard. The building is in the Renaissance style, and the end abutting on the Watnall-road is flanked on either side by massive towers with pinnacles. The structure is of red brick, with stone dressings, the external cornices being formed of ornamental brickwork. There is accommodation for between 700 and 800 people. The building has been erected from plans by Messrs. W. F. & R. Booker, architects, Nottingham. The joint contractors are Messrs. Joseph Munks and David Richer, the former doing the woodwork, and the latter the brickwork. The other work has been executed by sub-contractors, as follows:—Mr. George Pushman, stonemason; Mr. Peter Howis, gasfittings and ironwork; and Mr. Thomas Hall, plasterer. The cost has been about 4,000*l.*

Stargate.—On Easter Monday the foundation stone of a Wesleyan Methodist Chapel was laid at Stargate, a recently-erected colliery village situated about two miles east of Ryton. The contractor for the work is Mr. Thomas Marsh, of Blaydon Bank; and the edifice, when finished, is to accommodate about 200 persons.

Mirfield.—The four memorial stones of a new chapel for the Methodist New Connexion at Mirfield have been laid. The new chapel is calculated to cost 4,000*l.* Messrs. Sheard & Hanstock, of Batley, are the architects.

Ingatestone.—The Congregational Chapel at Ingatestone, Essex, was re-opened on the 5th inst., after alterations and repairs, and the erection of new schools adjoining. The plans were prepared by Mr. C. Pertwee, of Chelmsford, and the work was entrusted to Messrs. Choat & Son, of Chelmsford, builders, to execute. The total cost amounted to about 1,100*l.*

ROMAN CATHOLIC CHURCH-BUILDING NEWS.

West Bromwich.—The opening of the new Roman Catholic Church of St. Michael and the Holy Angels, West Bromwich, took place on the 19th ult. The building has been erected from designs by Messrs. Dunn & Hansom, of Newcastle-on-Tyne. The style is Early English, and the structure consists of nave, chancel, and north and south aisles, with a chapel at the end of each. In the interior coloured materials have been liberally introduced. The cost has been about 3,000*l.*, and sittings have been provided for about 450 worshippers. The total length of the nave and chancel is 95 ft., and the width of the building 47 ft.

Wells.—The Hon. and Rev. Dr. Clifford, Roman Catholic Bishop of Clifton, has recently laid the corner-stone of a Catholic chapel about to be erected in connexion with the convent of Carmelite Nuns in Chamberlain-street, Wells. The chapel, which he dedicated to the honour of Almighty God, under the invocation of St. Joseph and St. Theresa, is being erected at the cost of a Catholic gentleman, a relative of one of the nuns in the convent, and is from the design of Mr. Charles F. Hansom, of Clifton, architect, the contractors being Messrs. F. & G. Brown, of Frome. The plan consists of nave, 45 ft. by 21 ft.; chancel, 20 ft. by 21 ft.; and nuns' choir, at right angles to the latter, 35 ft. by 18 ft.; with double sacristies, &c. The west end faces Chamberlain-street, and will be nearly 50 ft. high. The general design is adapted from an interesting example of a small "wayside chapel" in Norfolk,—a kind of building very common in France and Belgium, but, at the present day, very rare in England. The roof inside is what is known as a "barrel roof"; it is entirely of wood, and is divided into panels by rich mouldings, having carved bosses at their intersection. The walls will be built of local stone, with dressings, &c., of Doulting freestone.

Templederry.—The new Roman Catholic Church at Templederry, which is being erected under the superintendence of Messrs. Wm. McCarthy & Gearan, builders and contractors, Limerick, is rapidly approaching completion. It is expected to be ready for consecration this summer. The building is of cruciform shape, with semicircular apse. Its cost when complete will be nearly 4,000*l.* It is 92 ft. long from the apse to the end of the nave, and 72 ft. wide at the transepts. It will have an open stained roof. The style is Early English. Mr. M. E. Hennessy, of Limerick, is the architect.

SCHOOL BOARD SCHOOLS.

Carisbrooke.—The new Board school buildings in the upper part of the village of Carisbrooke were opened on the 12th ult. The site commands a view of Carisbrooke Castle, and neighbouring down and woodland scenery. The buildings, of dark coloured bricks, slightly relieved by courses of a lighter colour, present a neat exterior. The buildings comprise boys' schoolroom, 56 ft. by 22 ft.; girls' room, 50 ft. by 22 ft., lofty, light, and well found in the necessary appliances; the entrance to each is through a large porch fitted for depositing caps, coats, and cloaks. There are also commodious class-rooms, and a board-room with a separate entrance. The two playgrounds have sheds, lavatories, and every other convenience. The architect is Mr. T. Dashwood, of Ryde; and the builder, Mr. A. Young, of Sandown.

Stockton.—On the 12th ult. the Stockton School Board ordered instructions to be given to Mr. Clephan, architect, to prepare plans of a school building to accommodate 650 boys, girls, and infants, proposed to be erected on a site recently purchased by the Board in Portrack-lane. The new schools are intended to supplant the present schools in that district, which are inadequate.

Wootton.—The foundation stone of new Board school at Wootton has been laid. The building, which has been designed by Mr. T. J. Jackson, architect, Bedford, will, when completed, afford accommodation for about 130 children, and will consist of a spacious hall and class-room, with

master's residence attached. The contract, amounting to 1,442*l.*, has been divided between Mr. James Potter, builder, Bedford, who does the brick and stone work, and Mr. Alfred Long, of Bedford, who is to supply the carpenters' and joiners' work.

PROPOSED NEW HALL FOR THE CITY COMPANIES.

A PROJECT is under consideration for the erection of a new hall for the joint use of those of the City companies who do not possess the advantage of having an official building for the transaction of their business such as several of the great companies have. A meeting has just been held at the offices of Mr. Crawford, in Moorgate-street, when the masters and clerks of the various companies who have no halls of their own were present. The object of the meeting was to consider the subject of erecting a central hall for their use. The question was discussed at considerable length, in the course of which Mr. Crawford said that there were three ways of carrying the matter out. The first was that the companies should unite in the creation of a common fund with the view of building a large hall. The second suggestion was that some of the companies should build a hall which they might sub-let to the smaller companies. The third proposition was to build a hall as a joint-stock enterprise. He observed that since the London Tavern was pulled down many of the companies had been sent adrift, so to speak. He added that plans for a building had been prepared by Mr. Walton, architect, and these plans were submitted. It was unanimously agreed that a hall of some kind must be built, either as a joint-stock undertaking or by some of the companies, and ultimately a provisional committee was appointed to prepare a scheme to be submitted to a future meeting.

AN UNHEALTHY BAKEHOUSE.

SOME unpleasant revelations were made the other day in the Lambeth Police-court, when a master baker carrying on business in Peckham was summoned before Mr. Chance, at the instance of the Vestry of Camberwell, for an infringement of the 4th section of the Bakehouse Regulation Act, 26 and 27 Vict., cap. 40. Mr. Marsden, vestry clerk, attended to prosecute.

James Comfort, one of the inspectors of nuisances, said in March he visited the premises, and found a water-closet in the bakehouse. It was about 7 ft. from where the bread was made, and on a kind of counter close to the closet was a quantity of jam. The door of the closet opened directly into the bakehouse, and there was an effluvium arising therefrom.

Dr. Bristowe, the medical officer of health to the vestry, bore out the statement, and added that, however well kept the closet might be, a nuisance would sure to exist likely to be injurious to health.

Defendant said there was no backyard, and some place must be found for the men working in the bakehouse.

Mr. Chance said it could not be tolerated that a closet should be allowed in such a position. Such a convenience, no doubt, was necessary; but it must not be of a character likely to injure the public health.

Defendant said it had existed thirty years, and he had heard of no ill effects from it. He would try and have some system of ventilation communicating with the street.

Dr. Bristowe said that would not, in his opinion, be sufficient. It required a complete separation of the closet from the bakehouse. In addition to sanitary matters, it was anything but right, in his opinion, that such a closet should exist within a few feet of where bread was made.

Mr. Chance said he quite coincided with this opinion. He would give the defendant an opportunity of making such alterations as would be satisfactory to the vestry, and for that purpose adjourned the summons.

A Decision to be contested.—At the meeting of the Camberwell Vestry on the 13th inst., the Sewers and Sanitary Committee reported that summonses were taken out at the Lambeth Police-court by order of the Vestry, under the 81st section of the Metropolis Management Act, and 64th section of the Amendment Act, 1862, against Mr. J. H. Clark for neglecting to lay on water to the closets of some houses in Peckham, which summonses were heard on the 7th March last, before Mr. Chance, who having heard evidence from two surveyors on behalf of the defendant, that in their opinion the places would not sustain the weight of cisterns, dismissed the summonses on the ground that they came within the provisions of the 81st section of the Act, which gave him the discretion to determine whether the laying on of water from a cistern would disturb a building or not. It was agreed, after discussion, that the clerk should be instructed to get a case for the opinion of the Court of Queen's Bench.

OBITUARY.

ON Tuesday last Mr. Alfred Burton died suddenly at his residence, St. Leonard's-on-Sea, from an attack of heart disease. He was brother of Mr. Decimus Burton, architect, and one of the ten children of Mr. James Burton, the eminent builder, who so essentially seconded Mr. Nash in his enterprises in Regent-street and Regent's Park under the Prince Regent; and which was the first movement in opening up London, and led to the enormous improvements of the metropolis in modern times. The father, Mr. James Burton, was the founder of the present town of St. Leonard's, where there were then barely a few trees and shrubs, and not a house nearer than the old town of Hastings, with which it now forms a continuous line of three miles of handsome houses.

Miscellanea.

Use of Steel in Railway Structures.—The committee, consisting of Sir John Hawkshaw, Colonel Yolland, and Mr. Barlow, appointed by the Board of Trade to consider the practicability of assigning a safe co-efficient for the use of steel in railway structures, and the correspondence connected therewith, have made their report. They recommend that the employment of steel in engineering structures should be authorised by the Board of Trade under the following conditions, namely:—1st. That the steel employed should be cast steel, or steel made by some process of fusion, subsequently rolled or hammered, and that it should be of a quality possessing considerable toughness and ductility, and that a certificate to the effect that the steel is of this description and quality should be forwarded to the Board of Trade by the engineer responsible for the structure. 2nd. That the greatest load which can be brought upon the bridge or structure, added to the weight of the superstructure, should not produce a greater strain in any part than 6½ tons per square inch. They remark that cases may arise when it will be proposed to use steel of special make and tenacity, and when a higher co-efficient than the above might be permissible, but they think those cases should be left for consideration by the Board of Trade when they arise.

Builders' Technical Education Classes.—A meeting was held, on the 19th inst., at the Eleusis Club, King's-road, Chelsea, for the purpose of establishing a branch class in that district. Mr. Frank E. Thicke presided, and there was a good attendance, the speakers being, in addition to the chairman, Messrs. Woodley, Berry, Gardner, Jeffery, Lawrence, Bachelor, and others. A retrospective history of the movement was given, wherein it was stated the committee had been successful in establishing branch classes in the Blackfriars-road and Greenwich, and were engaged in the preparations for forming classes in other districts which had sought their aid, such as Clapham and Hackney. At the close the names of thirty students were received as willing to join the local class in Chelsea. The chairman, in the course of his remarks, said that the success of these classes, now likely to be established all over the metropolis, was much enhanced by the material support given to them by the Royal Institute of British Architects, and he hoped that architects would personally assist in the good work.

The Institution of Civil Engineers.—At the ordinary meeting, held on the 24th of April, Mr. G. R. Stephenson, president, in the chair, the first paper read was "On a deep Boring for Coal at Scarle, Lincolnshire," by Professor Edward Hull, F.R.S. The second paper read was on "Street Tramways," by Mr. Robinson Souttar. Portland cement concrete formed the best foundation for a tramway, but care must be taken to give it time to set before laying and paving the lines. Where the work had to be hurried, bituminous concrete was preferable. Rectangular cross sleepers injured the concrete by their vibration, but if they had slightly bevelled sides, this objection would be overcome. Tramways with cast-iron bearings had been constructed in this country to a limited extent, but timber was preferable, as the jarring was diminished, and the travelling was rendered noiseless and agreeable. The life of the rail was also probably increased, and the concrete was saved from injury.

Great Fire at St. Louis.—The *Times* correspondent, writing on the 11th inst., gives details of this disaster. He says that the Southern Hotel, St. Louis, caught fire at half-past one that morning. This was one of the largest hotels in St. Louis, and formed an entire block, bounded by Fourth, Fifth, Walnut, and Elm streets. The building was six stories high, and contained accommodation for 700 persons. The fire broke out in the store-room on the basement, and, rapidly ascending by the elevators and the central rotunda, in ten minutes it had spread throughout the sixth floor under the roof where the servants mostly slept. Over twenty persons, chiefly women, jumped from the upper windows, and nearly all were killed. In an hour after the fire began the interior was all ablaze, and the roof and inner walls fell in. The hotel was entirely destroyed, and the loss is estimated at $1,000,000.

Technical Education and the Clothworkers' Company.—According to the *City Press*, the Textile Industries Department of the Yorkshire College of Science, Leeds, established and endowed in 1872-3 by the Clothworkers' Company, has been such a success that a deputation of the council of the college recently waited upon the court, and represented to the company the pressing importance of extending the textile industries department, which is by far the most successful branch of the college, and full to overflowing, by purchasing a new site, and thereon erecting a new and more extensive building, with necessary apparatus, &c. This the court has decided to do, and to do thoroughly, at a total estimated expenditure of 10,000*l.*, subject to certain conditions and obligations to be fulfilled by the council of the college.

Brass Eagles in Churches.—The unhappy dispute in the Established Church of England in regard to legal embellishments of the interior of sacred edifices is likely to lead to an attempt to remove the brass eagles that have, of late years, been introduced into several of our churches in lieu of the wooden reading-desks. The eagle destined for a first attack is, it appears, one at the church of St. Barnabas, Pimlico, and, so far as can be learnt, the "objectors" contend that it is a symbol of Popery, being used in heraldry, spread, to represent a prince of the Roman empire,—*i.e.*, the Pope. Others, however, only see in it the symbol of St. John, long used in the English Church. Thus it is that extreme claims on one side ever lead to extreme objections on the other.

New Post Office, Burton-on-Trent.—The new Post Office building at Burton-on-Trent was opened for business on the 17th inst. It covers an area of about 360 yards, and occupies the site of a block of dilapidated almshouses on the east side of High-street. It is from designs by Mr. Williams, of her Majesty's Office of Works, London; has been erected by Messrs. Lowe & Sons and their subcontractors; and, including cost of site, has involved a total expenditure of about 7,000*l.*

The Effects of Striking Oil.—One year ago (says an American paper) Bradford, Pennsylvania, had a small tavern and a few scattered farm-houses. Now it has 3,500 inhabitants, and hundreds of strangers are turned away from the hotels every night. Petroleum has wrought the miracle. The oil bolt seems to be about two miles wide, and wells have been sunk in the ravine of the Tunnungwant Creek. Land within twenty-five miles of the town in every direction is held at a fictitious valuation.

A Heavy Blast.—A successful blasting operation has been performed at one of the quarries of the South Cornwall Granite Company, situated near St. Blazey. About 700 tons were thrown down with very little breakage, and one block now standing in the quarry contains 8,000 cubic feet, or nearly 600 tons, without a flaw or joint of any kind or any discolouration. There are several smaller blocks of from 30 tons to 60 tons weight.

Kensington Assessments.—At the Kensington Vestry last week, Mr. Crowle being in the chair, a report was read from the Assessment Committee, stating that the valuation of property in the parish now amounted to 1,545,223*l.* Mr. Taylor in moving the adoption of the report, said that the increase in the valuation of property for the year amounted to 83,000*l.* He also said that the total expenses of the committee were 63*l.*, out of which 50*l.* were due to the clerk for his salary. The report was adopted.

Royal Architectural Museum.—On Monday last Mr. Maurice B. Adams was elected honorary secretary of the Royal Architectural Museum, Tufton-street, Westminster, in conjunction with Mr. Joseph Clarke.

Institution of Surveyors. — The next meeting will be held on Monday evening, April 30th, when the adjourned discussion on the paper read by Mr. J. Shaw at the last meeting on "The Rivers Pollution Prevention Act, 1876," will be resumed.

Sir Cordy Burrows.—A statue of Sir Cordy Burrows, physician and philanthropist, whose death is lamented beyond Brighton, is in the hands of Mr. E. B. Stephens, A.R.A. It is intended to occupy a site in the Pavilion grounds.

Pollution of Rivers.—The passage of the Danube or the Pruth by armies thirsting for each other's blood.—*Yorick.*

TENDERS.

For the erection of residence, for Mr. Chas. Stevens, Talfourd-road, Peckham-road. Messrs. Wm. Berriman & Sons, architects:—

W. & F. Croaker	£1,995	0	0
Faulkner	1,885	0	0
Bangs	1,850	0	0
G. & S. Fisher	1,690	0	0
Shapley	1,660	0	0
Prebble	1,605	0	0
Smith	1,597	0	0
Perkins & Co. (accepted)	1,360	0	0

For the erection of a villa residence in the London-road, Reading, for Mr. Brigham. Mr. E. J. Shrewsbury, architect:—

Woodbridge	£1,698	0	0
Simonds	1,657	0	0
Higgs	1,639	0	0
Sheppard	1,620	0	0
Woodroffe	1,620	0	0

For two cottages, stabling, &c., for Mr. Williams. Mr. A. J. Rouse, architect:—

	Two Cottages.		Stables and Coach-houses.	
Cox & Son	£1,230	0	£245	0
Baker	1,100	0	267	0
Niblett	1,053	0	238	0
Groome	1,000	0	210	0
Eeden	975	0	200	0
Edwards	920	0	210	0
Warr	869	0	195	0
Steed Bros	860	0	250	0
Bartlett	840	10	208	10
Congdon	830	0	329	0
Martin	780	0	220	0
James	755	0	199	0
Colebrook	745	0	195	0

For the erection of dwelling-house in Victoria Park-road, South Hackney, for Mr. D. Thomas. Messrs. T. & W. Stone, architects:—

Forest	£871	0	0
Howard	822	0	0
Stamp & Bowtle	773	0	0
Beal	675	0	0

For St. Saviour's Vicarage, Poplar. Messrs. F. & H. Francis, architects. Quantities supplied:—

	Vicarage.	Boundary Wall.
Watts	£2,674	£143
Nightingale	2,563	157
Bracher & Son	2,462	156
Atherton & Latta	2,315	149
Abraham	2,300	150
Sheffield	2,205	141
Bangs	2,200	143

For the erection of the Gravesend U.D. Board Schools for 600 children. Mr. A. J. Baker, architect. Quantities supplied:—

Gould	£6,055	0	0
Naylor	5,493	0	0
Cobham	5,032	0	0
Blake (accepted) *	4,990	0	0
Gates	4,584	5	0

* Subject to approval of Education Board.

For saw-frames and other machinery at Penmon Marble Quarries, Anglesea:—
Schofield & Co. accepted.

For the erection of a new Convalescent Home at Hunstanton. Mr. Robert Hutchinson, architect:—

Dawes	£3,094	0	0
Saint	3,080	0	0
Bardell Bros.	2,963	0	0
Brown	2,930	0	0
Farrow	2,697	0	0
Dye & Clack	2,895	0	0
Bunting	2,820	0	0
Bennett	2,797	0	0
Southgate	2,695	0	0
Fisher	2,648	0	0

For new buildings at the rear of No. 126, High-street, Guildford. Mr. Henry Peak, architect. Quantities supplied:—

T. Swayne	£2,045	10	0
Colls & Sons	2,040	0	0
W. Swayne	2,025	0	0
Nye	2,008	0	0
Strudwick	1,934	0	0
Mason	1,929	0	0
Mitchell Bros.	1,922	0	0
Pearce & Clark	1,890	0	0
Garnett	1,868	0	0
Smith & Sons	1,815	10	0
T. Smith	1,841	15	0
Moon (accepted)	1,836	15	0

For additions and alterations to Alfold Rectory, Surrey. Mr. Henry Peak, architect:—

Spooner (accepted)	£645	0	0

For alteration to stabling at Palmerston-yard, Kilburn, for the London General Omnibus Company. Mr. P. Tosh, architect. Quantities supplied by Mr. A. J. St. C. Bolton:—

Hooper	£765	0	0
Mason & Bristy	717	0	0
Downs	698	0	0
Stephenson	696	0	0
Beale	676	0	0
Hunt	643	0	0
Ward	641	0	0
Parkins	634	0	0
Aitchison & Walker	608	0	0

For building new public elementary schools, with master's residence, boundary walls, &c., at Denham, Bucks. Mr. R. Groom, architect:—

Kearley	£2,535	0	0
Brown	2,375	10	0
Taylor (accepted)	2,340	0	0

For works at Wapping, for the Thames Steam Ferry Co. Mr. Alex. R. Stenning, architect. Quantities by Messrs. Linsdell & Gifford:—

Contract No. 3.

Macey (accepted)	£4,500	0	0

Contract No. 4.

Newman & Mann	11,105	0	0

For enlargement of Methodist Free Church, Barking Side, Essex. Mr. F. Boreham, architect:—

Barnes	£230	0	0
Hannar	230	0	0
Horwood	210	0	0
Todd (accepted)	208	0	0

For Methodist Free Church schoolroom, Bellenden-road, Peckham. Mr. F. Boreham, architect. Quantites by Mr. C. Brooks:—

Tarrant & Sons	£1,054	0	0
Sawyer	1,053	0	0
Horwood	1,052	0	0
Crowhurst & Son	1,050	0	0
Thompson	1,038	0	0

For rebuilding No. 14, Nicholas-lane, Cannon-street, for Mr. C. V. Game:—

Ashby Brothers	£1,470	0	0
Newman & Mann	1,415	0	0
Manley & Rogers	1,398	0	0
Greenwood & Sons (accepted)	1,312	0	0

For additional story to hop warehouse, for Messrs. Dunk & Sons, Borough. Mr. Henry Currey, architect. Quantities by Mr. Gleed:—

Downs & Co.	£1,497	0	0
Joselyne	1,450	0	0

For fitting up and adapting room as lavatory, &c., at the Cathedral Hotel, St. Paul's Churchyard, for Mr. F. Sweeting. Mr. T. R. Parker, architect:—

Smith	£193	0	0
Temple & Forster	190	0	0
Reading	170	0	0

For building additional beer store and other alterations to the Stockwell Brewery, for Mr. C. Hammerton. Mr. T. R. Parker, architect:—

Merritt & Ashby	£473	0	0
Bragg	430	0	0
Maxwell Bros.	419	0	0

TO CORRESPONDENTS.

J. D. (such a scheme has been proposed by others besides our correspondent. We apprehend Mr. Haywood made no claim for novelty).—E. T. (either through the shrinking of the timber or the improper constitution of the plaster).—J. L. B.—A. & H.—W. W. L.—H. P.—R. H.—A. R. S.—W. V.—M.—G. & R. M.—R.—G. & Co.—G. & S. F.—R. G.—S.—R. M. P.

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